

PRODUCT STATUS LISTS
FOR
CONNECTICUT DEPARTMENT OF TRANSPORTATION PROJECTS

Prepared by: Research Liaison Committee

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Connecticut Department of Transportation
Bureau of Engineering and Highway Operations
Office of Research and Materials


Keith R. Lane, P.E.
Director of Research and Materials

James M. Sime, P.E.
Manager of Research

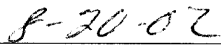
Andrew J. Mroczkowski
Committee Secretary

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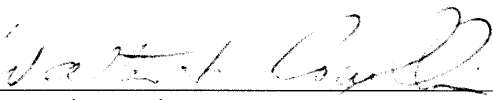
APPROVALS



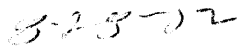
Office of Research & Materials



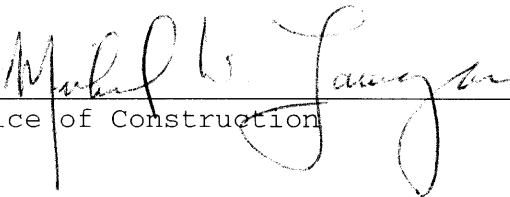
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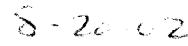
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Office of Construction



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PREFACE

A ready reference of construction products that have been approved for use in the Connecticut Department of Transportation is a useful tool for Department personnel, vendors and people in the construction industry.

This Report has been developed as a means for determining what products, suppliers, manufacturers, equipment and methodologies may be used on ConnDOT construction projects. The items referenced have met the approval of ConnDOT personnel in one of the following ways:

- They have been approved by the Research Liaison Committee.
- They have been used successfully since before the establishment of a formal approval process.
- They currently satisfy Department of Transportation specifications.

It should be understood that this document is open to refinement and will be under close scrutiny to ensure that the information contained herein is complete and accurate. Over the next years many items will be added and deleted.

Many products that may be used in ConnDOT will not be represented in this document because they conform to a generic specification, and the approval procedure is in accordance with the standard specifications.

The list code numbering system is based on the FHWA's SPEL (Special Product Evaluation List) "LIST OF CATEGORY CODES" (shown below); the categories are further broken down in this document so as to assign a distinct subcategory to each product listed herein.

LIST OF CATEGORY CODES

A = Adhesives (*)
B = Aggregates (*)
C = Barriers, Fencing and Roadside Structures
D = Bituminous Rejuvenators and Preservative Treatments (*)
E = Bituminous Materials and Additives
F = Culverts and Drainage Structures
G = Deicing Chemicals (*)
H = Joint Sealers and Fillers
I = Mulch and Erosion Controls
J = Patching Materials
K = Portland Cement Concrete Admixtures
L = Portland Cement Concrete Curing Materials
M = Portland Cement Concrete Finishing Products (*)
N = Reflective Crack Controls (*)
O = Rust Passivators
P = Skid Control Systems (*)
Q = Soil Sterilization and Weed Control Materials (*)
R = Soil Treatments (*)
S = Structural Materials and Components
T = Structural Paints
U = Testing and Construction Equipment (*)
V = Traffic Marking Materials
W = Waterproofing Membranes and Materials
X = Miscellaneous

- There are no references to this category in this publication.

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DEFINITIONS OF PARTS

The lists contained in this document are allocated among four different parts. These parts are defined as follows:

PART I - APPROVED PRODUCTS LISTS

Lists which are directly referenced in the standard specifications as Approved Products Lists. These lists will be updated annually, and no product may be used in these categories unless it is shown on an appropriate list.

PART II - PRODUCT REFERENCE LISTS (WITH ACCEPTANCE CRITERIA)

A directory of reference lists of products that have met the specific requirements of the Standard Specifications or Special Provisions; have been prequalified with a specified generic method; or have been approved by the Research Liaison Committee as alternates. These lists are kept and maintained in the various Department units that concern themselves with the products they contain. They are intended for reference by personnel in those units and are not to be freely distributed to the private sector. The lists on these pages are not Approved Products lists.

PART III - CATEGORIES OF UNLISTED PRODUCTS (WITH ACCEPTANCE CRITERIA)

A list of various product categories for which there are no lists kept. Products in these categories are governed by existing specifications or are not used in the Department. This is a partial listing that is presented here only because products they contain have come to the attention of the Research Liaison Committee. These categories are not represented in Parts I & II.

PART IV - CATEGORIES OF PRODUCTS FOR USE ON MUNICIPAL OR OTHER NON-CONNDOT SYSTEMS

A list of products considered to be acceptable but which are not used in the Department for reasons relating to cost, appearance, logistics, or other reasons not directly related to product performance.

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SI* (MODERN METRIC) CONVERSION FACTORS

APPROXIMATE CONVERSIONS TO SI UNITS

| Symbol | When You Know | Multiply By | To Find |
|----------------------------|------------------------|-------------|---------------------|
| LENGTH | | | |
| in | inches | 25.4 | millimetres |
| ft | foot | 0.305 | metres |
| yd | yards | 0.914 | metres |
| mi | miles | 1.61 | kilometres |
| AREA | | | |
| in ² | square inches | 645.2 | millimetres squared |
| ft ² | square feet | 0.093 | metres squared |
| yd ² | square yards | 0.836 | metres squared |
| ac | acres | 0.405 | hectares |
| mi ² | square miles | 2.59 | kilometres squared |
| VOLUME | | | |
| fl oz | fluid ounces | 29.57 | millilitres |
| gal | gallons | 3.785 | litres |
| ft ³ | cubic feet | 0.028 | metres cubed |
| yd ³ | cubic yards | 0.765 | metres cubed |
| MASS | | | |
| oz | ounces | 28.35 | grams |
| lb | pounds | 0.454 | kilograms |
| T | short tons (2000 lb) | 0.907 | megagrams |
| TEMPERATURE (exact) | | | |
| °F | Fahrenheit temperature | 5(F-32)/9 | Celcius temperature |

APPROXIMATE CONVERSIONS FROM SI UNITS

| Symbol | When You Know | Multiply By | To Find |
|----------------------------|---------------------|-------------|-----------------------------|
| LENGTH | | | |
| mm | millimetres | 0.039 | inches |
| m | metres | 3.28 | foot |
| m | metres | 1.09 | yards |
| km | kilometres | 0.621 | miles |
| AREA | | | |
| mm ² | millimetres squared | 0.0016 | square inches |
| m ² | metres squared | 10.764 | square feet |
| ha | hectares | 2.47 | acres |
| km ² | kilometres squared | 0.386 | square miles |
| VOLUME | | | |
| mL | millilitres | 0.034 | fluid ounces |
| L | litres | 0.264 | gallons |
| m ³ | metres cubed | 35.315 | cubic feet |
| m ³ | metres cubed | 1.308 | cubic yards |
| MASS | | | |
| g | grams | 0.035 | ounces |
| kg | kilograms | 2.205 | pounds |
| Mg | megagrams | 1.102 | short tons (2000 lb) |
| TEMPERATURE (exact) | | | |
| °C | Celcius temperature | 1.8C+32 | Fahrenheit temperature F |

NOTE: Volumes greater than 1000 L shall be shown in m³.

*SI is the symbol for the International System of Measurement

(Revised June 2000)

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TABLE OF CONTENTS

| | <u>Page</u> |
|--|-------------|
| TITLE PAGE | i |
| APPROVALS | iii |
| PREFACE | v |
| DEFINITIONS OF PARTS | vii |
| SI (Modern Metric) CONVERSION FACTORS | ix |
| TABLE OF CONTENTS | xi |
| PART I - APPROVED PRODUCTS LISTS | I-1 |
| PART II - PRODUCT REFERENCE LISTS (WITH ACCEPTANCE CRITERIA) | II-1 |
| PART III - CATEGORIES OF UNLISTED PRODUCTS (WITH ACCEPTANCE CRITERIA) | III-1 |
| PART IV - CATEGORIES OF PRODUCTS FOR USE ON MUNICIPAL OR OTHER NON-CONNDOT SYSTEMS..... | IV-1 |
| APPENDIX A - INDEX OF PRODUCT CATEGORIES (WITH CATEGORY CODES) | A-1 |

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PART I - APPROVED PRODUCTS LISTS

The following pages contain lists which are directly referenced in the standard specifications as Approved Products Lists. These lists will be updated annually, and no product may be used in these categories unless it is shown on an appropriate list.

CONTENTS - PART I

| <u>CODE</u> | <u>LIST DESCRIPTION</u> | <u>PAGE</u> |
|-------------|---|-------------|
| I-1 | Erosion Control Matting | I-3 |
| S-2 | Chemical Anchors | I-9 |
| V-9 | Reflective Sheeting Type I | I-11 |
| V-10 | Reflective Sheeting Type II | I-13 |
| V-11 | Reflective Sheeting Type III | I-14 |
| V-12 | Reflective Sheeting Type V | I-21 |
| V-13 | Reflective Sheeting Type VI | I-22 |
| V-14 | Reflective Sheeting- Bright Wide Angle Retroreflective | I-23 |
| V-14 | Reflective Sheeting Type VII | I-28 |
| V-15 | Reflective Sheeting Type VIII | I-28 |
| V-16 | Reflective Sheeting Type IX | I-29 |
| W-1 | Penetrating Sealer Protective Compound - Clear or Pigmented | I-31 |
| X-10 | Geotextiles | I-33 |

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PART I - APPROVED PRODUCTS LISTS - continued

I-1 Erosion Control Matting

SPECIFICATION: Form 815 Section 9.50 & M.13.09

PREAPPROVAL CRITERIA: See below

In general, organic materials are cheaper than synthetics, will photo-degrade after a period of time leaving a naturally vegetated channel, and are adequate for channels which are expected to carry storm water flows not exceeding 95.76 Pa shear stress. Synthetic materials generally do not photo-degrade and often remain as a permanent element within a drainage channel. Although more expensive, synthetic materials are generally best for critical channels which will carry high flows or velocities of storm water runoff.

Minimum Performance Standards

Erosion control matting is evaluated for use in eight Types, grouped in two Classes. In order for a product to be placed upon the Department's Approved Products List, it must meet the following Minimum Performance Standards.

CLASS 1: Slope Protection - Classification is based upon steepness of slope and soil type. The purpose is to protect the seed bed from loss of sediment, and promote the establishment of a warm-season, perennial vegetative cover.

Type A. Slopes 3:1 or Flatter - Clay Soils
Type B. Slopes 3:1 or Flatter - Sandy Soils
Type C. Slopes Steeper than 3:1 - Clay Soils
Type D. Slopes Steeper than 3:1 - Sandy Soils

Minimum Acceptable Vegetation Density Standards¹

| | <u>Clay Soils</u> | <u>Sandy Soils</u> |
|-------------------------|-------------------|--------------------|
| Slopes 3:1 or Flatter | 80% | 70% |
| Slopes steeper than 3:1 | 80% | 70% |

Minimum Acceptable Sediment Loss Standards (kg/10 m²)¹

| | <u>Clay Soils</u> | <u>Sandy Soils</u> |
|-------------------------|-------------------|--------------------|
| Slopes 3:1 or Flatter | 0.35 | 12.00 |
| Slopes steeper than 3:1 | 0.35 | 27.00 |

CLASS 2: Flexible Channel Liner Protection - Classification is based upon the permissible shear stress² (τ_p) present. The purpose is to protect the geometry of the channel from loss of sediment, and to promote the establishment of a warm-season, perennial vegetative cover.

Type E. Permissible shear stress: <25 Pa
Type F. Permissible shear stress: 25 to <50 Pa
Type G. Permissible shear stress: 50 to <100 Pa
Type H. Permissible shear stress: \geq 100 Pa

τ_p , the permissible shear stress, indicates the force required to initiate the movement of the lining material.

Minimum Acceptable Vegetation Density Standards¹

70%

Minimum Acceptable Sediment Loss Standards¹

| | <u>Average Soil Deformation (cm)</u> |
|--------------------------|--------------------------------------|
| Shear Stress 0 to 100 Pa | 1.15 |
| Shear Stress > 100 Pa | 1.00 |

PART I - APPROVED PRODUCTS LISTS - continued

I-1 Erosion Control Matting - continued

SPECIFICATION: Form 815 Section 9.50 & M.13.09

PREAPPROVAL CRITERIA: See below

It should be recognized that those products listed by brand or trade name on the Approved Products List have demonstrated their ability to meet or exceed the Department's minimum Performance standards. It is the Contractor's option as to which product he or she actually uses on a project, provided that the product used is on the Approved Products List for that application.

It will be the district's responsibility to verify that the Erosion Control Matting proposed by the Contractor is, in fact, listed as an acceptable product on the Approved Products List.

It should also be recognized that the decision to undergo testing for possible approval rests solely with the manufacturers or distributors of Erosion Control Matting. The Department has created a fair but rigorous testing process for Erosion Control Matting. The Department does not choose or stipulate which products are to be tested.

The Department's position is that, while we encourage the evaluation of new products for possible use in our operations, we cannot utilize a product which has not been tested and approved through the Department's evaluation process.

As new products are tested on an annual basis, those meeting our requirements will be added to the Approved Products List. If, by the time actual field installation of Erosion Control Matting commences on a project, new products have been added to the Approved Products List, the Contractor may elect to use these newly approved products even though they were not an "approved" product at the time bids were received on the project.

¹ Final Performance Analysis - 1995 Evaluation Cycle, Texas DOT/Texas Transportation Institute, Hydraulics and Erosion Control Laboratory, February, 1996.

² Shear Stress ranges based on values published in FHWA Hydraulic Engineering Circular No. 15 (HEC-15), Design of Roadside Channels with Flexible Linings, Publication No. FHWA-ZP-87-7, April, 1988.

PART I - APPROVED PRODUCTS LISTS - continued

I-1 Erosion Control Matting (See previous pages for definitions)

SPECIFICATION: Form 815, Section 9.50 & M.13.09

PREAPPROVAL CRITERIA: Certified Test Report

| | CLASS 1: SLOPE PROTECTION * | | | | CLASS 2: FLEXIBLE CHANNEL LINER PROTECTION | | | |
|---|---|---|---|---|--|----------------|-----------|-----------|
| | TYPE A | TYPE B | TYPE C | TYPE D | TYPE E * | TYPE F * | TYPE G * | TYPE H ** |
| American Excelsior Co 850 Avenue H East Arlington, TX 76011 | Curlex: III I QuikGrass QuikMow | Curlex: III I QuikGrass QuikMow | Curlex: III I QuikGrass QuikMow | Curlex: III I QuikGrass QuikMow | Curlex: III | Curlex: III | | |
| Belton Industries 8613 Roswell Rd. Suite.200 Atlanta, GA 30350 | | Geocoir/ DeKoWe 700 900 | | Geocoir/ DeKoWe 700 900 | | | | |
| Bonterra America, Inc. 355 West Chestnut St. Genesee, ID 83832 | S1 S2 CS2 (unseeded) | S1 S2 CS2 (unseeded) | C2 S2 CS2 (unseeded) | C2 S2 CS2 (unseeded) | C2 SFB | C2 SFB | C2 SFB | SFB 12 |

* Products listed in this category are generally temporary (bio- or photo-degradable). Exceptions are noted.

** Products listed in this category are generally permanent (non-bio- or non-photo-degradable). Exceptions are noted.

TYPE E - Generally includes, but is not limited to, Woven Paper Net, Jute Net.

TYPE F - Generally includes, but is not limited to, Fiberglass Roving (single or double).

TYPE G - Generally includes, but is not limited to, Straw with Net, Curled Wood Mat.

TYPE H - Generally includes, but is not limited to, Synthetic Net.

PART I - APPROVED PRODUCTS LISTS

I-1 Erosion Control Matting - continued

SPECIFICATION: Form 815, Section 9.50 & M.13.09
 PREAPPROVAL CRITERIA: Certified Test Report

| | CLASS 1: SLOPE PROTECTION * | | | | CLASS 2: FLEXIBLE CHANNEL LINER PROTECTION | | | |
|--|--|--|--|--------|--|----------|----------|-----------|
| | TYPE A | TYPE B | TYPE C | TYPE D | TYPE E * | TYPE F * | TYPE G * | TYPE H ** |
| Contech Construction Products, Inc. 265 Highland avenue Cheshire, CT 06410 | Contech: Ero-Mat Ero-Mat Standard High-Velocity Ero-Mat | Contech: Ero-Mat Ero-Mat Standard | Contech: High-Velocity Ero-Mat | | | | | |
| Conwed Fibers 219 Simpson Street Conover, NC 28613 | Futerra Mat | Futerra Mat | | | | | | |
| Greenstreak, Inc. 3400 Tree Court Industrial Blvd. St. Louis, MO 63122 | Pec-Mat | Pec-Mat | | | | | Pec-Mat | Pec-Mat |

* Products listed in this category are generally temporary (bio- or photo-degradable). Exceptions are noted.

** Products listed in this category are generally permanent (non-bio- or non-photo-degradable). Exceptions are noted.

TYPE E - Generally includes, but is not limited to, Woven Paper Net, Jute Net.

TYPE F - Generally includes, but is not limited to, Fiberglass Roving (single or double).

TYPE G - Generally includes, but is not limited to, Straw with Net, Curled Wood Mat.

TYPE H - Generally includes, but is not limited to, Synthetic Net.

PART I - APPROVED PRODUCTS LISTS

I-1 Erosion Control Matting - continued

SPECIFICATION: Form 815, Section 9.50 & M.13.09
PREAPPROVAL CRITERIA: Certified Test Report

| | CLASS 1: SLOPE PROTECTION * | | | | CLASS 2: FLEXIBLE CHANNEL LINER PROTECTION | | | |
|--|--|--|------------------------------------|--|--|--|--|---|
| | TYPE A | TYPE B | TYPE C | TYPE D | TYPE E * | TYPE F * | TYPE G * | TYPE H ** |
| North American Green 14649 Highway 41 North Evansville, IN 47711 | S150 S150BN SC150 SC150BN S75 S75BN | S150 S150BN SC150 SC150BN S75 S75BN | S150 S150BN SC150 SC150BN | S150 S150BN SC150 SC150BN C125 C125BN | P300 C125 C125BN | P300 | P300 | P300 C350 (Contains biodegrad- able component) |
| PPS Packaging Co. P.O. Box 427 3189 E. Manning Blvd. Fowler, CA 93625 | Xcel: Regular Superior | Xcel: Regular Superior | Xcel: Superior | Xcel: Superior | Xcel: SuperDuty | Xcel: SuperDuty | | |
| SI Geosolutions (formally know as Synthetic Industries) 6025 Lee Highway Chattanooga, TN 37421 | Landlok: TRM 435 | Landlok: TRM 435 | Landlok: TRM 435 | Landlok: TRM 435 | Landlok: TRM 435 TRM 1060 TRM 450 (both perma- nent) | Landlok: TRM 435 TRM 1060 TRM 450 (both perma- nent) | Landlok: TRM 435 TRM 1060 TRM 450 (both perma- nent) | Landlok: TRM 435 TRM 1060 TRM 450 (both perma- nent) Pyramat |

* Products listed in this category are generally temporary (bio- or photo-degradable). Exceptions are noted.

** Products listed in this category are generally permanent (non-bio- or non-photo-degradable). Exceptions are noted.

TYPE E - Generally includes, but is not limited to, Woven Paper Net, Jute Net.

TYPE F - Generally includes, but is not limited to, Fiberglass Roving (single or double).

TYPE G - Generally includes, but is not limited to, Straw with Net, Curled Wood Mat.

TYPE H - Generally includes, but is not limited to, Synthetic Net.

PART I - APPROVED PRODUCTS LISTS

I-1 Erosion Control Matting - continued

SPECIFICATION: Form 815, Section 9.50 & M.13.09
 PREAPPROVAL CRITERIA: Certified Test Report

| | CLASS 1: SLOPE PROTECTION * | | | | CLASS 2: FLEXIBLE CHANNEL LINER PROTECTION | | | |
|---|---|--|---------------------------------|--------|--|----------|----------|-----------|
| | TYPE A | TYPE B | TYPE C | TYPE D | TYPE E * | TYPE F * | TYPE G * | TYPE H ** |
| Verdyol Alabama, Inc. P.O. Box 605 407 Miles Parkway Pell City, AL 35125 | Ero-Mat: Standard Excelsior: Standard High- Velocity | Ero-Mat: Standard Excelsior: Standard | Excelsior: High- Velocity | | | | | |

* Products listed in this category are generally temporary (bio- or photo-degradable). Exceptions are noted.

** Products listed in this category are generally permanent (non-bio- or non-photo-degradable). Exceptions are noted.

TYPE E - Generally includes, but is not limited to, Woven Paper Net, Jute Net.

TYPE F - Generally includes, but is not limited to, Fiberglass Roving (single or double).

TYPE G - Generally includes, but is not limited to, Straw with Net, Curled Wood Mat.

TYPE H - Generally includes, but is not limited to, Synthetic Net.

PART I - APPROVED PRODUCTS LISTS - continued

S-2 Chemical Anchors

SPECIFICATION: Form 815, M.03.01-15

PREAPPROVAL CRITERIA: Independent laboratory pullout tests in accordance with ASTM E-1512

| <u>SUPPLIER/LOCATION</u> | <u>BRAND NAME</u> |
|--|--|
| Fosroc, Inc 150 Carley Court Georgetown, KY 40324 | Anchor Bond (was Lokset Anchor Bond) Anchortite (was Lokset Anchortite) (was Celtite 21-30 Anchortite) Anchortite (was Lokset TX Grout) (was Celtite 21-24TX) |
| U.S. Anchor Corp. 450 East Copans Road Pompano Beach, FL 33064 | Anchor-It HS200 Anchor-It HR200 |
| Powers Rawl Powers Fastening Inc. 2 Powers Square New Rochelle, NY 10801 | Chem-Stud |
| Covert Operations Inc. 1940 Freeman Avenue. Long Beach, CA 90804 | CIA Gel |
| ITW Ramset/Red Head 1300 North Michael Drive Wood Dale, IL 60191 | Epcon Acrylic 7 Epcon Ceramic 6 Granite 5 |
| American Highway Technologies (a wholly owned subsidiary of) Dayton Superior 402 South First Street Chicago, IL 61061-3136 | Highway Fast Set Epoxy |
| Hilti, Inc. P.O. Box 21148 Tulsa, OK 74121 | Hilti HIT C-100 Hilti HIT HY 150 Hilti HVA (HEA Capsules) Hilti HVA (HVA Capsules) |
| Kelibondanchors Keligrout Keligrout 101 P | Kelken Construction Systems P.O. Box 284 Parlin, NJ 08859 |
| Liquid Roc 300 28oz. Twin Tube Liquid Roc 300 Polyester Pump Liquid Roc 300 Capsule Anchors Liquid Roc 500 Epoxy Twin Tube | MKT Fastening LLC. #1 Gunnebo Drive Lonoke, AR. 72086 |

PART I - APPROVED PRODUCTS LISTS - continued

S-2 Chemical Anchors - continued

SPECIFICATION: Form 815, M.03.01-15

PREAPPROVAL CRITERIA: Independent laboratory pullout tests in accordance with ASTM E-1512

| <u>BRAND NAME</u> | <u>SUPPLIER/LOCATION</u> |
|---|--|
| Magnabond | A. & P. Foglia, Inc. 14 Hickory Drive East Brunswick, NJ 08816 |
| Polybac 1257 | Polygem, Inc. 1105 Carolina Ave. West Chicago, IL 60185 |
| Power-Fast Epoxy Injection Gel Powers RAWL Acrylic-100 | Powers Fasteners Inc. 2 Powers Square New Rochelle, NY 10801 |
| Pro-Poxy 300 Sonneborn Epogel Propoxy 300 Fast | Unitex 3101 Gardner Kansas City, MO 64120 |
| SEALTIGHT REZI-WELD GEL PASTE UCE | W.R. MEADOWS, INC. 300 Industrial Drive Hampshire, IL 60140 |
| Sikadur Injection Gel | Sika Corporation 201 Polito Ave. Lyndhurst, NJ 07071 |
| Simpson Epoxy-Tie Acrylic-Tie | Simpson Strong-Tie Co., Inc. Anchoring Systems Division 136 Official Road Addison, IL 60101 |
| Sonneborn Epogel | ChemRex Inc. 889 Vally Park Drive Shakopee, MN 55379 |
| Sure Anchor I (J-51) | Dayton Superior 402 South First Street Chicago, IL 61061-3136 |
| UltraBond 1300 | U. S. Anchor Corp. 450 East Copans Road Pompano Beach, FL 33064 |
| Unisorb Capsule Anchor | Unisorb Machinery Installation System P.O. Box 1000 Jackson, MI 49204-1000 |

PART I - APPROVED PRODUCTS LISTS - continued

V-9 Reflective Sheeting Type I

SPECIFICATION: Standard Specifications Section M.18.09.01 and a Materials Certificate submission conforming to Standard Specifications Section 1.06.07.

PREAPPROVAL CRITERIA: Conformance to ASTM D4956 and participation in the National Transportation Product Evaluation Program (NTPEP) three-year evaluation for Reflective sheeting.

| <u>Application / Supplier</u> | | <u>Product</u> |
|---|-------------------|--|
| Sheet Signs - Aluminum | | |
| Avery Dennison Reflective Films Division 6565 West Howard Street Niles, IL 60714 | Avery Dennison | T-1500/ T-1600 Series |
| | | T-1500/ T-1600 White |
| | | T-1501/ T-1601 Yellow |
| | | T-1504/ T-1604 Orange |
| | | T-1505/ T-1605 Blue |
| | | T-1507/ T-1607 Green |
| | | T-1508/ T-1608 Red (i.e. Stop Sign Red) |
| | | T-1509/ T-1609 Brown |
| Nippon Carbide Nippon Carbide Industries (USA) Main Office 3136 East Victoria Street Rancho Dominguez, CA 90221 | Nikkalite | 7100/8100 Series |
| | | 7112/8112 White |
| | | 7105/8105 Red |
| | | 7177/8177 Orange |
| | | 7104/8104 Yellow |
| | | 7106/8106 Blue |
| | | 7108/8108 Green |
| | | 7109/8109 Brown |

PART I - APPROVED PRODUCTS LIST - continued

V-9 Reflective Sheeting Type I

SPECIFICATION: Standard Specifications Section M.18.09.01 and a Materials Certificate submission conforming to Standard Specifications Section 1.06.07.

PREAPPROVAL CRITERIA: Conformance to ASTM D4956 and participation in the National Transportation Product Evaluation Program (NTPEP) three-year evaluation for Reflective sheeting.

| <u>Application / Supplier</u> | <u>Product</u> |
|---|-----------------------------------|
| Sheet Signs - Aluminum (continued) | |
| 3M Company Traffic Control Materials Div. 3M Center, Building 225-5S-08 Post Office Box 33225 St. Paul, MN 55133-3225 | 3M Scotchlite 2200/3200 Series |
| | 2290/3290 White |
| | 2271/3271 Yellow |
| | 2272/3272 Red |
| | 2275/3275 Blue |
| | 2277/3277 Green |
| | 2279/3279 Brown |
| | |
| 3M Company | 3M Scotchlite 3260 Series |
| | 3260 White |
| | 3261 Yellow |
| | 3262 Red |
| | 3264/3284 Orange |
| | 3265 Blue |
| | 3267 Green |
| | 3269 Brown |
| 3M Company | 3M Scotchlite 1484 Orange |
| | |

PART I - APPROVED PRODUCTS LIST - continued

V-10 Reflective Sheeting Type II

SPECIFICATION: Standard Specifications Section M.18.09.01 and a Materials Certificate submission conforming to Standard Specifications Section 1.06.07.

PREAPPROVAL CRITERIA: Conformance to ASTM D4956 and participation in the National Transportation Product Evaluation Program (NTPEP) three-year evaluation for Reflective sheeting.

| <u>Application / Supplier</u> | | <u>Product</u> |
|---|-------------------|--|
| Sheet Signs - Aluminum | | |
| Avery Dennison Reflective Films Division 6565 West Howard Street Niles, IL 60714 | Avery Dennison | T-2500/ T-2600 Series |
| | | T-2500/ T-2600 White |
| | | T-2501/ T-2601 Yellow |
| | | T-2504/ T-2604 Orange |
| | | T-2505/ T-2605 Blue |
| | | T-2507/ T-2607 Green |
| | | T-2508/ T-2608 Red (i.e. Stop Sign Red) |
| | | T-2509/ T-2609 Brown |
| Nippon Carbide Nippon Carbide Industries (USA) Main Office 3136 East Victoria Street Rancho Dominguez, CA 90221 | Nikkalite | 17000/18000 Series |
| | | 17012/18012 White |
| | | 17035/18035 Red |
| | | 17037/15037 Orange |
| | | 17004/18004 Yellow |
| | | 17006/18006 Blue |
| | | 17008/18008 Green |
| | | 18009 Brown |

PART I - APPROVED PRODUCTS LIST - continued

V-11 Reflective Sheeting Type III

SPECIFICATION: Standard Specifications Section M.18.09.01 and a Materials Certificate submission conforming to Standard Specifications Section 1.06.07.

PREAPPROVAL CRITERIA: Conformance to ASTM D4956 and participation in the National Transportation Product Evaluation Program (NTPEP) three-year evaluation for Reflective sheeting.

| <u>Application / Supplier</u> | <u>Product</u> |
|---|--|
| Extruded Signs - Aluminum | |
| 3M Company Traffic Control Materials Div. 3M Center, Building 225-5S-08 Post Office Box 33225 St. Paul, MN 55133-3225 | 3M |
| | Scotchlite 3800 Series |
| | 3870 Silver (White) |
| | 3871 Yellow |
| | 3872 Red |
| | 3875 Blue |
| | 3877 Green |
| Avery Dennison Reflective Films Division 6565 West Howard Street Niles, IL 60714 | 3879 Brown |
| | Avery |
| | Dennison |
| | T-5500 Series |
| | T-5500 White |
| | T-5501 Yellow |
| | T-5504 Orange |
| Nippon Carbide Industries (USA) Inc. 3136 East Victoria Street Rancho Dominguez, CA 90221 | T-5505 Blue |
| | T-5507 Green |
| | T-5508 Red (i.e. Stop Sign Red) |
| | T-5509 Brown |
| | Nikkalite Brand Ultralite Grade II 800 Series or 500 Series |
| | N812/N512 White |
| | N804/N504 Yellow |

PART I - APPROVED PRODUCTS LIST - continued

V-11 Reflective Sheeting Type III

SPECIFICATION: Standard Specifications Section M.18.09.01 and a Materials Certificate submission conforming to Standard Specifications Section 1.06.07.

PREAPPROVAL CRITERIA: Conformance to ASTM D4956 and participation in the National Transportation Product Evaluation Program (NTPEP) three-year evaluation for Reflective sheeting.

Application/Supplier

Product

**Extruded Signs - Aluminum
(continued)**

N805/N505 Red

N806/N506 Blue

N807/N507 Orange

N808/N508 Green

N809/N509 Brown

PART I - APPROVED PRODUCTS LIST - continued

V-11 Reflective Sheeting Type III

SPECIFICATION: Standard Specifications Section M.18.09.01 and a Materials Certificate submission conforming to Standard Specifications Section 1.06.07.

PREAPPROVAL CRITERIA: Conformance to ASTM D4956 and participation in the National Transportation Product Evaluation Program (NTPEP) three-year evaluation for Reflective sheeting.

| <u>Application/Supplier</u> | | <u>Product</u> |
|---|-------------------|--|
| Sheet Signs - Aluminum (Overhead) Avery Dennison Reflective Films Division 6565 West Howard Street Niles, IL 60714 | Avery Dennison | T-5500 Series |
| | | T-5500 White |
| | | T-5501 Yellow |
| | | T-5504 Orange |
| | | T-5505 Blue |
| | | T-5507 Green |
| | | T-5508 Red (i.e. Stop Sign Red) |
| | | T-5509 Brown |
| | | 2800/3800 Series |
| | | 2870/3870 Silver (White) |
| 3M Company Traffic Control Materials Div. 3M Center, Building 225-5S-08 Post Office Box 33225 St. Paul, MN 55133-3225 | 3M Scotchlite | 2871/3871 Yellow |
| | | 2872/3872 Red |
| | | 2875/3875 Blue |
| | | 2877/3877 Green |
| | | 2879/3879 Brown |
| | | Nikkalite Brand Ultralite Grade II 800 Series or 500 Series |
| | | N812/N512 White |
| | | N804/N504 Yellow |
| | | N805/N505 Red |
| | | N806/N506 Blue |
| Nippon Carbide Industries (USA) Inc. 3136 East Victoria Street Rancho Dominguez, CA 90221 | | N807/N507 Orange |
| | | N808/N508 Green |
| | | N809/N509 Brown |

PART I - APPROVED PRODUCTS LIST - continued

V-11 Reflective Sheeting Type III

SPECIFICATION: Standard Specifications Section M.18.09.01 and a Materials Certificate submission conforming to Standard Specifications Section 1.06.07.

PREAPPROVAL CRITERIA: Conformance to ASTM D4956 and participation in the National Transportation Product Evaluation Program (NTPEP) three-year evaluation for Reflective Sheeting

| <u>Application/Supplier</u> | | <u>Product</u> |
|---|------------|----------------------|
| Traffic Drums - Plastic | | |
| 42"/1m Traffic Cone | | |
| 3M Company | 3M | |
| Traffic Control Materials Div. | Scotchlite | |
| 3M Center, Building 225-5S-08 | | 3810 Series |
| Post Office Box 33225 | | |
| St. Paul, MN 55133-3225 | | 3810 White |
| | | 3814 Orange |
| Construction Signs Encapsulated Lens | | |
| Substrate includes aluminum, plywood, plastic, masonite and roll up signs. | | |
| 3M Company | 3M | |
| | Scotchlite | 2820/3820 Series |
| | | 2820/3820 White |
| | | 2821/3821 Yellow |
| | | 2824/3824 Orange |
| Avery Dennison | Avery | |
| Reflective Films Division | Dennison | T-5500 Series |
| 6565 West Howard Street | | T-5500 White |
| Niles, IL 60714 | | T-5501 Yellow |
| | | T-5504 Orange |
| | | T-5505 Blue |
| | | T-5507 Green |
| | | T-5508 Red |
| | | (i.e. Stop Sign Red) |
| | | T-5509 Brown |

PART I - APPROVED PRODUCTS LIST - continued

V-11 Reflective Sheeting Type III

SPECIFICATION: Standard Specifications Section M.18.09.01 and a Materials Certificate submission conforming to Standard Specifications Section 1.06.07.

PREAPPROVAL CRITERIA: Conformance to ASTM D4956 and participation in the National Transportation Product Evaluation Program (NTPEP) three-year evaluation for Reflective Sheeting

Application/Supplier

Product

**Traffic Drums - Plastic
42"/1m Traffic Cone (continued)**

Nippon Carbide Industries (USA)
Inc.
3136 East Victoria Street
Rancho Dominguez, CA 90221

Nikkalite Brand Ultralite Grade II
800 Series or 500 Series

N812/N512 White

N804/N504 Yellow

N805/N505 Red

N806/N506 Blue

N807/N507 Orange

N808/N508 Green

N809/N509 Brown

PART I - APPROVED PRODUCTS LIST - continued

V-11 Reflective Sheeting Type III

SPECIFICATION: Standard Specifications Section M.18.09.01 and a Materials Certificate submission conforming to Standard Specifications Section 1.06.07.

PREAPPROVAL CRITERIA: Conformance to ASTM D4956 and participation in the National Transportation Product Evaluation Program (NTPEP) three-year evaluation for Reflective sheeting.

| <u>Application/Supplier</u> | | <u>Product</u> |
|---|----------------|---|
| Traffic Cone | | |
| 3M Company | 3M Scotchlite | 3840 Series |
| Traffic Control Materials Div. | | |
| 3M Center, Building 225-5S-08 | | 3840 White |
| Post Office Box 33225 | | |
| St. Paul, MN 55133-3225 | | |
| Construction Barricade | | |
| Substrate includes aluminum, plastic, and high impact styrene. | | |
| 3M Company | 3M Scotchlite | 3810 Series |
| | | 3810 White |
| | | 3814 Orange |
| Avery Dennison | Avery Dennison | T-5500 Series |
| Reflective Films Division | | |
| 6565 West Howard Street | | T-5500 White |
| Niles, IL 60714 | | T-5504 Orange |
| Nippon Carbide Industries (USA) Inc. | | Nikkalite Brand Ultralite Grade II 800 Series or 500 Series |
| 3136 East Victoria Street | | N812/N512 White |
| Rancho Dominguez, CA 90221 | | N807/N507 Orange |

V-11 Reflective Sheeting Type III

SPECIFICATION: Standard Specifications Section M.18.09.01 and a Materials Certificate submission conforming to Standard Specifications Section 1.06.07.

PREAPPROVAL CRITERIA: Conformance to ASTM D4956 and participation in the National Transportation Product Evaluation Program (NTPEP) three-year evaluation for Reflective sheeting.

Application/Supplier

Product

**Opposing Traffic Lane Divider
(Flexible Sheeting)**

| | | |
|--------------------------------|---------------|-------------|
| 3M Company | | |
| Traffic Control Materials Div. | 3M Scotchlite | 3810 Series |
| 3M Center, Building 225-5S-08 | | |
| Post Office Box 33225 | | 3814 Orange |
| St. Paul, MN 55133-3225 | | |

Glare Screens

| | | |
|------------|---------------|-------------|
| 3M Company | 3M Scotchlite | 3810 Series |
| | | 3810 White |
| | | 3811 Yellow |

PART I - APPROVED PRODUCTS LIST - continued

V-12 Reflective Sheeting Type V

SPECIFICATION: Standard Specifications Section M.18.09.01 and a Materials Certificate submission conforming to Standard Specifications Section 1.06.07.

PREAPPROVAL CRITERIA: Conformance to ASTM D4956 and participation in the National Transportation Product Evaluation Program (NTPEP) three-year evaluation for Reflective sheeting.

| <u>Application/Supplier</u> | | <u>Product</u> |
|--|-----------|----------------|
| Delineators - Aluminum | | |
| Reflexite North America Post Office Box 1200 New Britain, CT 06050 | Reflexite | AR 1000 Yellow |
| | | AR 1000 White |
| Reflexite North America | Reflexite | AP 1000 White |
| | | AP 1000 Yellow |
| | | AP 1000 Red |

PART I - APPROVED PRODUCTS LIST - continued

V-13 Reflective Sheeting Type VI

SPECIFICATION: Standard Specifications Section M.18.09.01 and a Materials Certificate submission conforming to Standard Specifications Section 1.06.07.

PREAPPROVAL CRITERIA: Conformance to ASTM D4956 and participation in the National Transportation Product Evaluation Program (NTPEP) three-year evaluation for Reflective sheeting.

Application/Supplier

Product

**Construction Signs Encapsulated
Lens Substrate includes
aluminum, plywood, plastic,
masonite and roll up signs.**

Reflexite North America
Post Office Box 1200
New Britain, CT 06050

Reflexite

Orange Roll Up Sign

Reflexite North America

Reflexite

Fluorescent Orange
Super Bright Roll
Up Sign.

Traffic Cone

Reflexite North America

Reflexite

2010 Series

2010 White
Cone Collar

PART I - APPROVED PRODUCTS LIST - continued

V-14 Reflective Sheeting - Bright Wide Angle Retroreflective

SPECIFICATION: Form 815 Section M.18.09.02

PREAPPROVAL CRITERIA: Conformance to the following ConnDOT specification through Certified Test Reports.

Reflective Sheeting: Bright Wide Angle Retroreflective

1. Test Methods:

1.1 Test Conditions: Unless otherwise specified herein, all applied and unapplied test samples and specimens shall be conditioned at the standard conditions of $73 \pm 3^{\circ}\text{F}$ ($23 \pm 3^{\circ}\text{C}$) and $50 \pm 5\%$ relative humidity for 24 hours prior to testing.

Test Panels: Unless otherwise specified herein, when tests are to be performed using test panels, the specimens of retroreflective material shall be applied to smooth aluminum cut from ASTM B-209 Alloy 5052-H36, 5052-H38, 5154-H38 or 6061-T6 sheets in 0.020 inch (0.51 mm), 0.040 inch (1.0 mm) or 0.063 inch (1.6 mm) thickness. The aluminum shall be degreased and lightly acid etched before the specimens are applied. The specimens shall be applied to the panels in accordance with the recommendations of the retroreflective sheeting manufacturer.

2. Color Requirements:

| Color | TABLE I Color Specification Limits* (Daytime) | | | | | | | | Reflectance Limit Y (%) | |
|--------|--|-------|-------|-------|-------|-------|-------|-------|----------------------------|------|
| | 1 | | 2 | | 3 | | 4 | | | |
| | x | y | x | y | X | Y | x | y | min. | max. |
| White | 0.305 | 0.305 | 0.355 | 0.355 | 0.335 | 0.375 | 0.285 | 0.325 | 40 | - |
| Yellow | 0.487 | 0.423 | 0.545 | 0.454 | 0.465 | 0.534 | 0.427 | 0.483 | 24 | 45 |
| Red | 0.690 | 0.310 | 0.595 | 0.315 | 0.569 | 0.341 | 0.655 | 0.345 | 3 | 15 |
| Blue | 0.078 | 0.171 | 0.150 | 0.220 | 0.210 | 0.160 | 0.137 | 0.038 | 1 | 10 |
| Green | 0.030 | 0.398 | 0.166 | 0.364 | 0.286 | 0.446 | 0.201 | 0.794 | 3 | 9 |

* The four pairs of chromaticity coordinates determine the acceptable color in terms of the CIE 1931 standard calorimetric system measured with standard illuminant D65.

Color Test - Conformance to color requirements of Table I shall be determined by instrumental method in accordance with ASTM E 1164 on sheeting applied to aluminum test panels. The values shall be determined on a HunterLab Labscan 6000 0/45 Spectrocolorimeter with option CMR 559 [(or approved equal 0/45 (45/0) instrument with circumferential viewing (illumination)]. Computations shall be done in accordance with ASTM E 308 for the 2 degree observer.

3. Coefficient of Retroreflection, RA: The coefficients of retroreflection shall not be less than the minimum values specified in Table II. Testing shall be in accordance with ASTM E 810. The observation angles shall be 0.2, 0.33, 0.5 and 1.0 degrees. Coefficients of retroreflection RA shall be specified in units of candelas per foot-candle per square foot (candelas per lux per square meter).

The datum mark (arrow) imprinted on the face of the sheeting shall be the datum mark for test purposes. The testing shall be performed at 0 degrees rotation unless otherwise noted. For the 0 degree rotation angle, the direction of the datum mark shall be parallel to the observation plane. For the 90 degree rotation angle the datum mark is perpendicular to the plane. It is recommended that signs are constructed with datum mark in a vertical position to maximize wide entrance angle performance.

For colored, transparent overlay films and for screen printed transparent color areas on white sheeting, the ratios of the RA for the white to the RA for the color, when measured at 0.2 degree observation, -4 degree entrance, and 0 degree rotation, shall be 5:1 to 15:1 for red, not less than 5:1 for blue and not less than 5:1 for green when processed in accordance with the sheeting manufacturer's recommendations.

TABLE II
Minimum Coefficient of Retroreflection RA
Candelas per foot-candle per square foot
(Candelas per lux per square meter)

| Observation Angle ° | Entrance Angle ° | Rotation Angle ° | White | Yellow | Red | Blue | Green |
|---------------------|------------------|------------------|-------|--------|-----|------|-------|
| 0.20 | -4 | 0 | 430 | 350 | 110 | 20 | 45 |
| 0.33 | -4 | 0 | 300 | 250 | 75 | 15 | 33 |
| 0.50 | -4 | 0 | 250 | 200 | 60 | 10 | 25 |
| 1.00 | -4 | 0 | 80 | 65 | 20 | 4 | 10 |
| 0.20 | 30 | 0 | 235 | 190 | 60 | 11 | 24 |
| 0.33 | 30 | 0 | 150 | 130 | 30 | 7 | 18 |
| 0.50 | 30 | 0 | 170 | 140 | 40 | 7 | 19 |
| 1.00 | 30 | 0 | 50 | 40 | 13 | 2.5 | 5 |
| 0.20 | 40 | 90 | 150 | 125 | 40 | 6 | 15 |
| 0.33 | 40 | 90 | 85 | 75 | 25 | 4 | 8 |
| 0.50 | 40 | 90 | 35 | 30 | 10 | 1.5 | 3.5 |
| 1.00 | 40 | 90 | 20 | 17 | 6 | 0.7 | 2.0 |

4. Gloss: The retroreflective sheeting shall have an 85 degree specular gloss of not less than 50 when tested in accordance with ASTM D523.

5. Color Processing: The retroreflective sheeting shall permit cutting and color processing with compatible transparent and opaque process colors in accordance with the sheeting manufacturer's recommendations at temperatures of 59 to 100°F (15 to 38°C) and relative humidity of 20% to 80%. The sheeting shall be heat resistant and permit force curing without staining of applied or unapplied sheeting at temperatures recommended by the sheeting manufacturer.

6. Flexibility: The retroreflective sheeting with the liner removed and conditioned as in 1.1 shall be sufficiently flexible to show no cracking when slowly bent, in one second's time, around 0.125 inch (3 mm) mandrel, with the adhesive contacting the mandrel, at test conditions. Talcum powder shall be spread on the adhesive to prevent sticking to the mandrel.

7. Adhesive: The protective liner attached to the adhesive shall be removed by peeling without soaking in water or other solutions, without breaking, tearing, or removing any adhesive from the backing. The protective liner shall be easily removed following accelerated storage for 4 hours at 158°F (70°C) under a weight of 2.5 pounds per square inch (0.175 kg/cm²). The adhesive backing of the retroreflective sheeting shall produce a bond to support a 1.75 pound (0.80 kg) weight for 5 minutes without the bond peeling for a distance of more than 2.0 inches (50 mm) when applied to a test panel prepared as in 1.2. Apply 4 inches (100 mm) of a 1 inch (25 mm) x 6 inch (150 mm) specimen to a test panel. Condition and then position the panel face down horizontally, suspend the weight from the free end of the sample and allow it to hang free at an angle of 90 degrees to the panel surface for 5 minutes.

8. Impact Resistance: The retroreflective sheeting applied according to the sheeting manufacturer's recommendations to a test panel of alloy 6061-T6, 0.040 inch (1 mm) by 3 inch (75 mm) by 5 inch (125 mm) and conditioned as in 1.1, shall show no cracking outside the impact area when the face of the panel is subjected to an impact of 100 inch-pounds (11.3 N·m) using a weight with a 0.625 inch (16 mm) diameter rounded tip dropped from a height necessary to generate an impact of 100 inch-pounds (11.3 N·m), at test temperatures of both 32°F (0°C) and 72°F (22°C).

9. Resistance to Accelerated Outdoor Weathering: The retroreflective surface of the sheeting shall be weather resistant and show no appreciable cracking, blistering, crazing, or dimensional change after 2 years unprotected outdoor exposure, facing the equator and inclined 45 degrees from the vertical. Following weather exposure, panels shall be washed in a 5% HCL solution for 45 seconds, rinsed thoroughly with clean water, blotted with a soft cloth and brought to equilibrium at standard conditions. After cleaning, the coefficient of retroreflection shall not be less than the values in Table III when measured at 0 degree rotation and the colors shall conform to the requirements of Table I. The sample shall:

9.1 Show no appreciable evidence of cracking, scaling, pitting, blistering, edge lifting or curling or more than 0.031 inch (800 µm) shrinkage or expansion.

9.2 Be measured only at angles of: 0.2 degree observation, -4 degree entrance, and 0 degree rotation; and 1.0 degree observation, -4 degree entrance, and 0 degree rotation. Where more than one panel of a color is measured, the coefficient of retroreflection shall be the average of all determinations.

TABLE III
Minimum Coefficient of Retroreflection RA
after Accelerated Outdoor Weathering
candelas per foot-candle per square foot
(candelas per lux per square meter)

| Color | Observation Angle ° | Entrance Angle ° | Rotation Angle ° | cd/fc/ft ² (cd/lx/m ²) |
|--------|------------------------|---------------------|---------------------|--|
| White | 0.2 | -4 | 0 | 250 |
| | 1.0 | -4 | 0 | 45 |
| Yellow | 0.2 | -4 | 0 | 200 |
| | 1.0 | -4 | 0 | 35 |
| Red | 0.2 | -4 | 0 | 60 |
| | 1.0 | -4 | 0 | 12 |
| Blue | 0.2 | -4 | 0 | 11 |
| | 1.0 | -4 | 0 | 1.3 |
| Green | 0.2 | -4 | 0 | 25 |
| | 1.0 | -4 | 0 | 3 |

10. Resistance to Heat: The retroreflective sheeting, applied to a test panel and conditioned as in 1.1, shall be measured in accordance with 3 at 0.2 degree observation and -4 degree entrance angles and 0 degree rotation and exposed to 170 + 5°F (77 + 3°C) for 24 hours in an air circulating oven. After heat exposure the sheeting shall retain a minimum of 70% of the original coefficient of retroreflection when measured at room temperature.

11. Resistance to Corrosion: The retroreflective sheeting applied to a test panel and conditioned as in 1.1, shall show no loss of adhesion, appreciable discoloration or corrosion and after cleaning shall retain a minimum of 80% of the original coefficient of retroreflection when measured at 0.2 degree observation, -4 degree entrance and 0 degree rotation angles after 1000 hours exposure to a 5% concentration salt spray at 95°F (35°C) when tested in accordance with ASTM B 117.

PART I - APPROVED PRODUCTS LIST - continued

V-14 Reflective Sheeting - Bright Wide Angle Retroreflective

SPECIFICATION: Form 815 Section M.18.09.02

PREAPPROVAL CRITERIA: See previous ConnDOT specification.

| <u>Application/Supplier</u> | | <u>Product</u> |
|---|---------------|----------------------------------|
| Extruded Signs - Aluminum | | |
| 3M Company Traffic Control Materials Div. 3M Center, Building 225-5S-08 Post Office Box 33225 St. Paul, MN 55133-3225 | 3M Scotchlite | Diamond Grade VIP 3990 Series |
| | | 3990 White |
| | | 3991 Yellow |
| | | 3992 Red |
| | | 3995 Blue |
| | | 3997 Green |
| Sheet Signs - Aluminum | | |
| 3M Company | 3M Scotchlite | Diamond Grade VIP 3990 Series |
| | | 3990 White |
| | | 3991 Yellow |
| | | 3992 Red |
| | | 3995 Blue |
| | | 3997 Green |
| Delineators - Aluminum | | |
| 3M Company | 3M Scotchlite | Diamond Grade VIP 3990 Series |
| | | 3990 White |
| | | 3991 Yellow |
| | | 3992 Red |
| | | 3995 Blue |
| | | 3997 Green |

PART I - APPROVED PRODUCTS LIST - continued

V-14 Reflective Sheeting Type VII

SPECIFICATION: Form 815 Section M.18.09.01

PREAPPROVAL CRITERIA: Conformance to ASTM D4956 and participation in the National Transportation Product Evaluation Program (NTPEP) three-year evaluation for reflective sheeting.

Application/Supplier

Product

No applications at this time.

| | | | |
|--------------------------------|---------------------|------|--------|
| 3M Company | 3M Scotchlite | 3970 | White |
| Traffic Control Materials Div. | Reflective Sheeting | | |
| 3M Center, Building 225-5S-08 | Diamond Grade LDP | 3971 | Yellow |
| Post Office Box 33225 | | | |
| St. Paul, MN 55133-3225 | | 3972 | Red |
| | | 3975 | Blue |
| | | 3977 | Green |

V-15 Reflective Sheeting Type VIII

SPECIFICATION: Form 815 Section M.18.09.01

PREAPPROVAL CRITERIA: Conformance to ASTM D4956 and participation in the National Transportation Product Evaluation Program (NTPEP) three-year evaluation for reflective sheeting.

Application/Supplier

Product

Sheet Signs - Aluminum
Stop, 4-Way, Wrong Way, Do Not
Enter, Guide Signs (7529)

| | | |
|------------------------------|------|---------------|
| Avery Dennison | 7000 | Series |
| Reflective Products Division | | |
| 6565 West Howard Street | 7500 | White |
| Niles, Illinois 60714 | 7501 | Yellow |
| | 7504 | Orange |
| | 7505 | Blue |
| | 7506 | Green |
| | 7507 | Red |
| | 7508 | Brown |
| | 7529 | Worboys Green |

PART I - APPROVED PRODUCTS LIST - continued

V-16 Reflective Sheeting Type IX

SPECIFICATION: Form 815 Section M.18.09.01

PREAPPROVAL CRITERIA: Conformance to ASTM D4956 and participation in the National Transportation Product Evaluation Program (NTPEP) three-year evaluation for reflective sheeting.

Application/Supplier

Product

Sheet Signs - Aluminum

Stop, 4-Way, Wrong Way, Do not
Enter

3M Company
Traffic Control Materials Div.
3M Center, Building 225-5S-08
Post Office Box 33225
St. Paul, MN 55133-3225

3M Scotchlite
Reflective Sheeting
Diamond Grade VIP

3990 White
3991 Yellow
3992 Red
3995 Blue
3997 Green

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PART I - APPROVED PRODUCTS LISTS - continued

W-1 Penetrating Sealer Protective Compound - Clear or Pigmented

SPECIFICATION: Form 815, M.03.02 & M.03.01-11

PREAPPROVAL CRITERIA: Independent laboratory test results per NCHRP 244
for northern climates

TYPES OF SEALER - Each product will be assigned a category based on its physical characteristics, as follows:

- P Pigmented. Not necessarily white. Overcoat for clear.
- C Clear. Intended for use on structure wing walls, beam seats, inside faces of parapets, or as called for by the engineer Requires pigmented sealant overcoat.
- W White. Intended for use on Jersey barrier or when called for by the engineer.

| <u>BRAND NAME</u> | <u>TYPE</u> | <u>SUPPLIER/LOCATION</u> |
|---|-------------|--|
| Baracade 16 (Formerly SMS-250 and Chemstop SMS-250) | C | Tamms Industries 3835 State Route 72 Kirkland, IL 60146 |
| Vexcon Envio Smooth VOC | P | Vexcon Chemicals 7240 State Road. |
| Vexcon Envio Tex VOC | C | Philadelphia, PA 19135 |
| Vexcon Powerseal 40% | | |
| CHEM-TRETE BSM 40 VOC Dynasylan BH-N | C | Sivento, Inc. 65 Challenger Road Ridgefield Park, NJ 07660 Attn: Ed McGettigan |
| Consolideck SX WB Consolideck Saltguard WB | C | ProSoCo, Inc. 3741 Greenway Circle Lawrence, KS 66046 E-mail: prosoco@prosoco.com |
| Crete-Shield | C | Princeton Chemical, Inc. P.O. Box 132 Lincoln, RI. 02865 |
| Enviroseal 20 Enviroseal 40 | C,P | ChemRex Inc. 889 Vally Park Drive Shakopee, MN 55379 Attn: Steve Paterson |
| WABO HorseySet WDE | C,P | Watson-Bowman & Acme 95 Pineview Drive Amherst, NY 14228 |
| Masterseal SL40 | C | Master Builders, Inc. Admixture Division 23700 Chagrin Blvd. Cleveland, OH 44122-5554 Attn: Frances McNeal |

PART I - APPROVED PRODUCTS LISTS - continued

W-1 Penetrating Sealer Protective Compound - Clear or Pigmented - continued

SPECIFICATION: Form 815, M.03.02 & M.03.01-11

PREAPPROVAL CRITERIA: Independent laboratory test results per NCHRP 244
for northern climates

| <u>BRAND NAME</u> | <u>TYPE</u> | <u>SUPPLIER/LOCATION</u> |
|-------------------|-------------|---|
| Modac F | C,P | Modac Products Co. 600 Reed Road Broomall, PA 19008 |
| Sil-Act ATS-42 | C | Advanced Chemical Technologies 100 W. Wilshire Blvd. Suite C-1 Oklahoma City, OK 73116 |
| Stifel-S | C | Kinsman Corporation Nox-crete Products Group P.O. Box 8102 Omaha, NE 68108 |

X-10 Geotextiles

SPECIFICATION: Form 815, Sections 2.19.02, 7.51, 7.55 and M.08.01-26
PREAPPROVAL CRITERIA: Certified Test Report according to AASHTO M 288

The following list denotes those geotextiles which are approved for use on ConnDOT projects. The categories listed are in accordance with the AASHTO M 288 specification. Geotextile selection shall be based on the following definitive information and the applicable design criteria.

1. Subsurface Drainage - Geotextiles within this category shall be used for, but not limited to the following applications: pavement edge drains; interceptor drains; wall drains; recharge basins and relief wells. The geotextile shall be designed to allow the passage of water normal to its surface while retaining in situ soil without clogging. Class A drainage applications for fabrics are where installation stresses are more severe than Class B applications; i.e., very coarse, sharp, angular aggregate is used; a heavy degree of compaction (95% or greater by AASHTO method T 99) is specified; or depth of trench is greater than 3.00 m. Class B drainage applications are those where the fabric is used with smooth graded surfaces having no sharp angular projections no sharp angular aggregate is used; compaction requirements are light (less than 95% by AASHTO method T 99); and trenches are less than 3.00 m in depth.
2. Sediment Control - Geotextiles within this category shall be used as a barrier-fence designed to remove suspended particles from the water that passes through it. "Wire Supported" signifies that fabric is supported with a mesh made of wire or plastic.
3. Erosion Control - Geotextiles within this category shall be used for, but not limited to the following applications: cut and fill slope protection; protection of various small drainage structures and ditches, wave protection for causeways and shore line roadway embankments and scour protection for structures such as bridges and abutments. The geotextile shall be designed to allow the passage of water while retaining in situ soil without clogging. Class A erosion control applications are those where the fabrics are used under conditions where installation stresses are more severe than Class B, i.e., aggregate placement height should be less than 1.00 m and aggregate weights should not exceed 115.00 kg. Class B erosion control applications are those where the fabric is used in structures or under conditions where the fabric is protected by a sand cushion or by "zero drop height" placement of aggregate.
4. Separation - Geotextiles within this category shall be used for but are not limited to the following applications: separation of dissimilar materials such as subgrades and pavement base courses and zones in embankments, foundations and select fill materials. When soil stabilization is the primary concern, the Design Engineer is cautioned that a detailed process must be followed, taking into consideration not only the separation properties of the geotextile, but its reinforcement function as well. The geotextile shall be designed to allow the passage of water while retaining in situ soil without clogging.

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PART I - APPROVED PRODUCTS LISTS - continued

X-10 Geotextiles - continued

SPECIFICATION: Form 815, Sections 2.19.02, 7.51, 7.55 and M.08.01-26

PREAPPROVAL CRITERIA: Certified Test Report According to AASHTO M 288 (See page I-13)

| | <u>SUBSURFACE DRAINAGE</u> | | <u>SEDIMENT CONTROL</u> | | <u>EROSION CONTROL</u> | | <u>SEPARATION</u> | |
|--|--|--|-------------------------|------------------------------|--|--|------------------------------|--|
| | Class A | Class B | Wire Supported | Self Supported | Class A | Class B | High Surviv. | Medium. Surviv. |
| Advanced Drainage Systems, Inc. Don Regan Sales, Inc. 905 Meridan Road P.O. Box 3277 Waterbury, CT 06705 | ADS: 1020 1220 1620 7000 7700 8800 9530 * 9650 9670 | ADS: 1020 1220 1620 3300 4000 4420 5000 6600 7000 7700 8800 9530 * 9750 9670 | | | ADS: 1020 1220 1620 7700 8800 9530 * 9750 9670 | ADS: 1020 1220 1620 4000 4420 5000 6600 7000 7700 8800 9530 * 9750 9670 | ADS: 1020 1220 1620 | ADS: 1020 1220 1620 7000 7700 8800 9530 * 9750 |
| American Engineering Fabrics, Inc. 1 Coffin Ave. New Bedford, MA 02746 | AEF: 880 1080 1280 600W 650W 200W 300W | AEF: 480 480HS 680 880 1080 1280 600W 650W 200W 300W 100W 130W 150W | AEF: 180W | AEF: 100W 150W 180W | AEF: 880 1080 1280 650W 300W | AEF: 480 480HS 680 880 1080 1280 650W 300W 100W 180W | AEF: 1080 1280 300W | AEF: 880 1080 1280 600W 200W 300W |

* Product is satisfactory only where the affected soil contains less than 50% material, by weight, passing the number 200 sieve.

PART I - APPROVED PRODUCTS LISTS - continued

X-10 Geotextiles - continued

SPECIFICATION: Form 815, Sections 2.19.02, 7.51, 7.55 and M.08.01-26

PREAPPROVAL CRITERIA: Certified Test Report According to AASHTO M 288 (See page I-13)

| | <u>SUBSURFACE DRAINAGE</u> | | <u>SEDIMENT CONTROL</u> | | <u>EROSION CONTROL</u> | | <u>SEPARATION</u> | |
|---|--|--|-------------------------|-------------------|--|--|--|--|
| | Class A | Class B | Wire Supported | Self Supported | Class A | Class B | High Surviv. | Medium. Surviv. |
| Amoco Fabrics & Fibers Co. 260 The Bluffs Austell, GA 30168 | 1199 2000 2019 4552 4553 4510 4512 4516 | 4535 4545 4546 4547 4550 4551 4552 4553 4510 4512 4516 | | 2130 | 1199 2002 * 2006 * 2019 4553 4510 4512 4516 | 1199 2002 * 2006 * 2019 4545 4546 4547 4551 4553 4510 4512 4516 | 2006 * 2016 * 4552 4553 4510 4512 4516 | 2002 2006 * 2016 * 4547 4550 4551 4552 4553 4510 4512 4516 |
| Belton Industries, Inc. P.O. Box 127 Belton, SC 29627 | 768 769 777 880 | 307 308 751 768 769 777 880 | 806 | 307 751 806 | 769 777 | 307 769 777 806 | 777 | 768 777 880 |
| Cady Bag Company P.O. Box 68 Pearson, GA 31642 | | | CSF 330 | CSF 330 | | | | |

* Product is satisfactory only where the affected soil contains less than 50% material, by weight, passing the number 200 sieve.

PART I - APPROVED PRODUCTS LISTS - continued

X-10 Geotextiles - continued

SPECIFICATION: Form 815, Sections 2.19.02, 7.51, 7.55 and M.08.01-26

PREAPPROVAL CRITERIA: Certified Test Report According to AASHTO M 288 (See page I-13)

| | <u>SUBSURFACE DRAINAGE</u> | | <u>SEDIMENT CONTROL</u> | | <u>EROSION CONTROL</u> | | <u>SEPARATION</u> | |
|---|----------------------------|--|---|----------------------|--|--|------------------------|-----------------------------|
| | Class A | Class B | Wire Supported | Self Supported | Class A | Class B | High Surviv. | Medium. Surviv. |
| Carthage Mills 4243 Hunt Road Cincinnati, OH 45242 | FX-75NW Carthage- 6% | FX-35HS FX-40HS FX-35NW FX-40NW FX-75NW Carthage- 6% | FX-11 | FX-11 | FX-75NW FX-55 * FX-66 Carthage- 6% | FX-35HS FX-40HS FX-35NW FX-40NW FX-33 FX-44 FX-75NW FX-55 * FX-66 Carthage- 6% | FX-66 FX-75NW | FX-55 * FX-66 FX-75NW |
| Contech Construction Products, Inc. 265 Highland avenue Cheshire, CT 06410 | C70NW C-200 | C31NW C-200 C40NW C45NW | | | C80NW C200 C70-06 | C35NW C-200 C70-06 | C70NW C80NW C300 | C45NW C60NW C-200 |
| DGI Industries P.O. Box 70 Bennington, NH 03442 | | | CT138036 CT213036 Note: Above products same as Amoco 1380 & 2130 respectively | CT138036 CT213036 | | | | |

* Product is satisfactory only where the affected soil contains less than 50% material, by weight, passing the number 200 sieve.

PART I - APPROVED PRODUCTS LISTS - continued

X-10 Geotextiles - continued

SPECIFICATION: Form 815, Sections 2.19.02, 7.51, 7.55 and M.08.01-26

PREAPPROVAL CRITERIA: Certified Test Report According to AASHTO M 288 (See page I-13)

| | <u>SUBSURFACE DRAINAGE</u> | | <u>SEDIMENT CONTROL</u> | | <u>EROSION CONTROL</u> | | <u>SEPARATION</u> | |
|--|----------------------------|---------------------------|---|-----------------------|------------------------|---------------------------|-------------------|---------------------|
| | Class A | Class B | Wire Supported | Self Supported | Class A | Class B | High Surviv. | Medium. Surviv. |
| Evergreen Technologies Inc.(Div. of Tensar) 200 Miller Sellers Dr. Evergreen, AL 36401 (Acquired Polyfelt Americas 12/95) | TG650 | TG650 TG500 TG420 * | TG420 | TG550 | TG700 | TG700 TG500 TG420 * | TG650 | TG650 TG500 |
| A. H. Harris& Sons, Inc. P.O. Box 311058 367 Alumni Road Newington, CT. 06131-1058 | | | Harris Siltfence Note: (Same as Amoco 2130) | Harris Siltfence | | | | |
| Hoechst Celanese Corp. P.O. Box 5650 Spartanburg, SC 29304-5650 | | | Trevira: 011/140 | | | Trevira: 011/140 | | Trevira: 011/200 |
| KS McCurdy Inc D.B.A. Geotex Fabricator Inc P.O. Box 499 Island Pond, VT 05846 | | | McC Fence EZ Fence Note: Must use LINQ GTF 180 | McC Fence EZ Fence | | | | |

* Product is satisfactory only where the affected soil contains less than 50% material, by weight, passing the number 200 sieve.

PART I - APPROVED PRODUCTS LISTS - continued

X-10 Geotextiles - continued

SPECIFICATION: Form 815, Sections 2.19.02, 7.51, 7.55 and M.08.01-26

PREAPPROVAL CRITERIA: Certified Test Report According to AASHTO M 288 (See page I-13)

| | <u>SUBSURFACE DRAINAGE</u> | | <u>SEDIMENT CONTROL</u> | | <u>EROSION CONTROL</u> | | <u>SEPARATION</u> | |
|---|---|--|--|--|---|--|--|---|
| | Class A | Class B | Wire Supported | Self Supported | Class A | Class B | High Surviv. | Medium. Surviv. |
| LINQ Industrial Fabrics, Inc. 4550 W. Fifth North St. Summerville, SC 29483 Attn: Warren Johnson | 180EX 225EX 250EX 275EX 350EX | 180EX 125EX 130EX 150EX 225EX 250EX 275EX 350EX | 180 102 104 105 Note: Above products use GTF 180 fabric. | 180 102 104 105 | 180EX 225EX 250EX 275EX 350EX GTF 400E | 180EX 125EX 130EX 150EX 225EX 250EX 275EX 350EX GTF 400E | 180EX 225EX 250EX 275EX GTF 300 * 350EX TYPAR: 3631 | 180EX GTF 200S GTF 200 * GTF 300 * 130EX 150EX 225EX 250EX 275EX 350EX |
| Mutual Industries Inc. 707 West Grange Street Philadelphia, PA 19120 1 800 523 0888 | | | MISF 1830 MISF 1855 | MISF 1830 MISF 1855 | | | | |
| OnSite Systems, Inc. P.O. Box 241166 Charlotte, NC 28224 | | | WCF 120 | WCF 120 | WCF 200 | WCF 150 WCF 200 | WCF 300 | WCF 200 WCF 300 |
| Reemay, Inc 70 Old Hickory Blvd. P.O. Box 511 Old Hickory, TN 37138 | | TYPAR: 3401G | TYPAR: 3401G | TYPAR: 3401G | | TYPAR: 3401G | TYPAR: 3631G | TYPAR: 3401G |
| Synthetic Industries 4019 Industry Drive Chattanooga, TN 37416 | Geotex: 701 200ST | Geotex: 311 200ST | Geotex: 910SC 915SC 117F | Geotex: 910SC 915SC 117F | Geotex: 801 200ST 104F | Geotex: 351 200ST 104F | Geotex: 701 315ST | Geotex: 451 200ST |

* Product is satisfactory only where the affected soil contains less than 50% material, by weight, passing the number 200 sieve.

PART I - APPROVED PRODUCTS LISTS - continued

X-10 Geotextiles - continued

SPECIFICATION: Form 815, Sections 2.19.02, 7.51, 7.55 and M.08.01-26

PREAPPROVAL CRITERIA: Certified Test Report According to AASHTO M 288 (See page I-13)

| | <u>SUBSURFACE DRAINAGE</u> | | <u>SEDIMENT CONTROL</u> | | <u>EROSION CONTROL</u> | | <u>SEPARATION</u> | |
|---|--|---|--|---|---|--|--|--|
| | Class A | Class B | Wire Supported | Self Supported | Class A | Class B | High Surviv. | Medium. Surviv. |
| TC Mirafi 365 South Holland Dr. Pendergrass, GA 30567 | Filter-Weave: 401 404 500 700 | Filter-weave: 401 404 500 700 140N 140NL 135N 140NC | Filter-weave: 401 500 100X 700 | Filter-weave: 401 404 500 100X 700 Enviro-fence | Filter-weave: 401 404 500 600X * 700 | Filter-weave: 401 404 500 140N 140NL 600X * 700 | Filter-weave: HP 370 404 500 600X * 700 | Filter-weave: 401 500 500X * 600X * 700 140N 550X |
| TNS Advanced Technologies Inc. 681 DeYoung Road Greer, South Carolina 29651 | R070 R080 W200 W300 M404 M706 | R031 R035 R040 R042 W200 | R035 W100 | W100 | W200 W300 M404 M706 R080 | R035 R040 R042 W200 W300 | W300 R070 R080 | W200 R042 |
| Webtec, Inc. P.O. Box 240302 Charlotte, NC 28224 | Terratex: EP NO8 | Terratex: SD NO4 EP NO8 SO4 | Terratex: SC SC-90 | Terratex: SC SC-90 | Terratex: GS * NO8 | Terratex: SD NO4 GS-150 * GS * NO8 | Terratex: HD * EP | Terratex: GS * NO8 HD * EP |

* Product is satisfactory only where the affected soil contains less than 50% material, by weight, passing the number 200 sieve.

PART II - PRODUCT REFERENCE LISTS (WITH ACCEPTANCE CRITERIA)

Each list referenced in these pages is kept and maintained within the Department in the RESPONSIBLE UNIT that concerns itself with the products it contains. The Technical Contact is the primary contact for a particular list. The Administrative Contact is the supervisory or managerial person to whom the Technical Contact reports. These lists are intended for reference by personnel in those units and are not to be freely distributed to the private sector. The lists on these pages are of products that have met the specific requirements of the Standard Specifications or Special Provisions, have been prequalified with a specified generic method or have been approved by the Research Liaison Committee as an alternate. These are not "Approved Products Lists."

E-1 **Antistripping Additives**

RESPONSIBLE UNIT: Division of Materials Testing
Technical Contact: Nicholas Corona; phone: (860) 258-0326
Admin. Contact: Keith R. Lane

Acceptance Criteria: Form 815, M.04.03; AASHTO T182

E-2 **Polypropylene Fibers (for class 5A)**

RESPONSIBLE UNIT: Division of Materials Testing
Technical Contact: Nicholas Corona; phone: (860) 258-0326
Admin. Contact: Keith R. Lane

Acceptance Criteria: Form 815, M.04.03

E-3 **Polyester Fibers (for class 5B)**

RESPONSIBLE UNIT: Division of Materials Testing
Technical Contact: Nicholas Corona; phone: (860) 258-0326
Admin. Contact: Keith R. Lane

Acceptance Criteria: Form 815, M.04.03

E-4 **Release Agents**

RESPONSIBLE UNIT: Division of Materials Testing
Technical Contact: Nicholas Corona; phone: (860) 258-0326
Admin. Contact: Keith R. Lane

Acceptance Criteria: Form 815, 4.06.03-6

F-12 **Prefabricated Geocomposite Drain**

RESPONSIBLE UNIT: Soils and Foundation Section
Technical Contact: Leo L. Fontaine; phone: (860) 594-3180
Admin. Contact: Leo L. Fontaine;
Acceptance Criteria: Special Provision Prequalification Procedure

F-13 **Stormwater Treatment Oil Grit Separators**

RESPONSIBLE UNIT: Office Of Maintenance
Technical Contact: Jennifer J. Korb, phone; (860) 594-2067
Paul Corrente, phone; (860) 594-2932
Admin. Contact: Michael W. Lonergan

Acceptance Criteria: Special Provision Prequalification Procedure

H-1 **Pavement Joint and Crack Sealants**

RESPONSIBLE UNIT: Division of Materials Testing
Technical Contact: Nicholas Corona; phone: (860) 258-0326
Admin. Contact: Keith R. Lane

Acceptance Criteria: Form 815, M.04.02

H-2 **Asphalt Plug Expansion Joints - Movement Capacity 40 mm or less**

RESPONSIBLE UNIT: Division of Bridge Design
Technical Contact: Ralph Daily; phone: (860) 594-3312
Admin. Contact: Gordon Barton

Acceptance Criteria: Special Provision; Prequalification
Procedure

H-3 **Prefabricated Expansion Joints - Movement Capacity 100 mm or Less**

RESPONSIBLE UNIT: Division of Bridge Design
Technical Contact: Ralph Daily; phone: (860) 594-3312
Admin. Contact: Gordon Barton

Acceptance Criteria: Special Provision; Prequalification
Procedure

H-4 **Prefabricated Expansion Joints - Movement Capacity Over 100 mm**

RESPONSIBLE UNIT: Division of Bridge Design
Technical Contact: Ralph Daily; phone: (860) 594-3312
Admin. Contact: Gordon Barton

Acceptance Criteria: Special Provision; Prequalification
Procedure

H-5 **Elastomeric Concrete Expansion Joint Systems**

RESPONSIBLE UNIT: Division of Bridge Design
Technical Contact: Ralph Daily; phone: (860) 594-3312
Admin. Contact: Gordon Barton

Acceptance Criteria: Special Provision; Prequalification
Procedur

H-6 **Compression Seals**

RESPONSIBLE UNIT: Division of Bridge Design
Technical Contact: Ralph Daily; phone: (860) 594-3312
Admin. Contact: Gordon Barton

Acceptance Criteria: Form 815, M.17.02; AASHTO D3342

J-1 **Fast Setting High Strength Patch Materials for Concrete Bridge Decks**

RESPONSIBLE UNIT: Division of Bridge Design
Technical Contact: Ralph Daily; phone: (860) 594-3312
Admin. Contact: Gordon Barton

Acceptance Criteria: Special Provision; Prequalification
Procedure

J-2 **Fast Setting High Strength Header Materials**

RESPONSIBLE UNIT: Division of Bridge Design
Technical Contact: Ralph Daily; phone: (860) 594-3312
Admin. Contact: Gordon Barton

Acceptance Criteria: Special Provision; Prequalification
Procedure

J-3 **Concrete Repair Materials for Structures**

RESPONSIBLE UNIT: Division of Bridge Design
Technical Contact: Ralph Daily; phone: (860) 594-3312
Admin. Contact: Gordon Barton

Acceptance Criteria: Special Provision; Prequalification
Procedure

K-1 **Air-Entraining Admixtures for Portland Cement Concrete**

RESPONSIBLE UNIT: Division of Materials Testing
Technical Contact: Robert G. Lauzon; Phone: (860) 258-0305
Admin. Contact: Keith R. Lane

Acceptance Criteria: Form 815, M.03.01-9

K-2 **Retarders for Portland Cement Concrete**

RESPONSIBLE UNIT: Division of Materials Testing
Technical Contact: Robert G. Lauzon; Phone: (860) 258-0305
Admin. Contact: Keith R. Lane

Acceptance Criteria: Form 815, M.03.01-9

K-3 **Water-Reducing Admixtures for Portland Cement Concrete**

RESPONSIBLE UNIT: Division of Materials Testing
Technical Contact: Robert G. Lauzon; Phone: (860) 258-0305
Admin. Contact: Keith R. Lane

Acceptance Criteria: Form 815, M.03.01-9

K-4 **High Range Water-Reducing Admixtures for Portland Cement Concrete**

RESPONSIBLE UNIT: Division of Materials Testing
Technical Contact: Robert G. Lauzon; Phone: (860) 258-0305
Admin. Contact: Keith R. Lane

Acceptance Criteria: Form 815, M.03.01-9

S-1 **Bearings - Pot, Spherical or Disc**

RESPONSIBLE UNIT: Division of Bridge Design
Technical Contact: Ralph Daily; phone: (860) 594-3312
Admin. Contact: Gordon Barton

Acceptance Criteria: Recurring Special Provision

S-3 **File Point Reinforcement - Prefabricated**

RESPONSIBLE UNIT: Division of Materials Testing
Technical Contact: Robert G. Lauzon; Phone: (860) 258-0305
Admin. Contact: Keith R. Lane

Acceptance Criteria: ASTM A27

S-4 **File Splicers - Prefabricated**

RESPONSIBLE UNIT: Division of Materials Testing
Technical Contact: Robert G. Lauzon; Phone: (860) 258-0305
Admin. Contact: Keith R. Lane

Acceptance Criteria: ASTM A36

S-5 **Rebar Connectors**

RESPONSIBLE UNIT: Division of Materials Testing
Technical Contact: Robert G. Lauzon; Phone: (860) 258-0305
Admin. Contact: Keith R. Lane

Acceptance Criteria: AASHTO 8.32.2.3

S-6 **Shear Connectors - Welded Stud**

RESPONSIBLE UNIT: Division of Materials Testing
Technical Contact: Robert G. Lauzon; Phone: (860) 258-0305
Admin. Contact: Keith R. Lane

Acceptance Criteria: Form 815, M.06.02-12; Prequalification
Procedure in accordance with AWS D1.5

S-7 **Portland Cement**

RESPONSIBLE UNIT: Division of Materials Testing
Technical Contact: Robert G. Lauzon; Phone: (860) 258-0305
Admin. Contact: Keith R. Lane

Acceptance Criteria: Form 815, M.03.01-3

S-11 **Grouts - Non-Shrink Cementitious**

RESPONSIBLE UNIT: Division of Materials Testing
Technical Contact: Robert G. Lauzon; Phone: (860) 258-0305
Admin. Contact: Keith R. Lane

Acceptance Criteria: Form 815, M.03.01-12

S-15 **Retaining Walls**

RESPONSIBLE UNIT: Division of Bridge Design
Technical Contact: Ralph Daily; phone: (860) 594-3312
Admin. Contact: Gordon Barton

Acceptance Criteria: Special Provision

T-1 **Coating Systems for New Steel**

RESPONSIBLE UNIT: Division of Materials Testing
Technical Contact: John Giannini; phone: (860) 258-0324
Admin. Contact: Keith R. Lane

Acceptance Criteria: Prequalification Procedure NEPCOAT

T-4 **Maintenance Coating Systems - Single Coat Field Touch Up Paints**

RESPONSIBLE UNIT: Division of Bridge Design
Technical Contact: Ralph Daily; phone: (860) 594-3312
Admin. Contact: Gordon Barton

Acceptance Criteria: Recurring Special Provision; Prequalification Procedure

T-5 Field Coatings for Blast Cleaned Steel

RESPONSIBLE UNIT: Division of Bridge Design
Technical Contact: John Giannini; phone: (860) 258-0324
Admin. Contact: Keith R. Lane

Acceptance Criteria: Prequalification Procedure NEPCOAT

**V-4 Channelizing Devices - Traffic Cones and Drums Type 1
(purchased after October 1, 1998)**

RESPONSIBLE UNIT: Division of Traffic Engineering
Technical Contact: John F. Carey; phone: (860) 594-2788
Admin. Contact: Vincent A. Avino

Acceptance Criteria: 1. Catalog cut check for compliance with state specifications.
2. A letter from the manufacture self-certifying that testing has been done in accordance with NCHRP 350 requirements.

W-2 Membrane Waterproofing

RESPONSIBLE UNIT: Division of Bridge Design
Technical Contact: Ralph Daily; phone: (860) 594-3312
Admin. Contact: Gordon Barton

Acceptance Criteria: Sheet Membranes: Recurring Special Provision;
Prequalification Procedure
Woven Glass Fabric: Form 815, M.12.04

X-1 Epoxy Injection Crack Repair

RESPONSIBLE UNIT: Division of Materials Testing
Technical Contact: Robert G. Lauzon; Phone: (860) 258-0305
Admin. Contact: Keith R. Lane

Acceptance Criteria: Recurring Special Provision; Prequalification Procedure by independent lab.

X-3 Glare Shields

RESPONSIBLE UNIT: Division of Traffic Engineering
Technical Contact: Vincent A. Avino; Phone: (860) 594-2788

PART II - PRODUCT REFERENCE LISTS (WITH ACCEPTANCE CRITERIA) - CONTINUED

Admin. Contact: Richard J. Howard

Acceptance Criteria: Special Provision and Field Testing

X-17 **Rebar Zinc Rich Coatings - Rehabilitation**

RESPONSIBLE UNIT: Division of Bridge Design

Technical Contact: Ralph Daily; phone: (860) 594-3312

Admin. Contact: Gordon Barton

Acceptance Criteria: Recurring Special Provision; Prequalification
Procedure

X-26 **Offset Blocks for W-beam Guide Rail - Plastic**

RESPONSIBLE UNIT: Division of Highway Design

Technical Contact: Monique Burns; phone: (860) 594-3292

Admin. Contact: Carl Bard

Acceptance Criteria: Recurring Special Provision; Prequalification
Procedure

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PART III - CATEGORIES OF UNLISTED PRODUCTS (WITH ACCEPTANCE CRITERIA)

A partial list of categories of the various products for which there are no lists kept. These products are governed by existing specifications or are not used in the Department.

| <u>CODE</u> | <u>CATEGORY</u> | <u>ACCEPTANCE CRITERIA</u> |
|-------------|--|--|
| C-1 | Chain Link Fence - Pipe for Framework..... | Form 815, M.10.01 |
| C-2 | Safety Fence for Construction Sites..... | OSHA standard |
| C-3 | Guardrail Beams..... | Form 815, M.10.02 |
| C-4 | Jersey Barrier..... | Special provision |
| C-5 | Noise Barrier..... | Special provision |
| C-6 | Bridge Parapet - Slipform..... | Special provision |
| C-8 | Slope Protection - Temporary..... | Special provision |
| C-9 | Fence Posts..... | Standard Drawings |
| F-2 | Manholes - Plastic Prefabricated..... | Not used in ConnDOT |
| F-3 | Manhole Steps..... | Form 815, M.08.02-5; Standard sheet 507-A |
| F-4 | Culverts - Precast Concrete..... | Special provision |
| F-5 | Manhole Extension Rings and Frames..... | Form 815, M.08.02-5 |
| F-7 | Catch Basin Grates - Zinc Metalized..... | Br. Des. to modify std. sheets |
| F-8 | Pipe Relining..... | Special provision |
| F-9 | Plastic Pipe..... | Generic specification |
| F-10 | Corrugated Metal Pipe - Smooth Interior..... | Form 815, 6.51 & M.08.01 |
| F-11 | Corrugated Metal Pipe - unlined..... | Special provision |
| H-7 | Silicone Expansion Joint Sealants.... | Special provision |
| H-8 | Polyurethane Joint Sealants..... | Special provision |
| H-9 | Detector Loop Sealants..... | Special provision |
| H-10 | Construction Joints..... | Special provision |
| I-2 | Sediment Control for Drain Inlets - Temporary..... | Special provision |
| J-4 | Pothole Patching Machines..... | Maintenance item |
| J-5 | Pothole Patch Materials..... | Form 815 |
| K-5 | Concrete Additives..... | Special provision |
| L-1 | Concrete Curing Blankets..... | Form 815, 4.01.03 & 6.01.03-19 |
| L-2 | Concrete Curing Compounds..... | Form 815, 4.01.03, 6.01.03-19 and M.03.01-10 |
| O-1 | Rust Converters..... | Not used in ConnDOT |
| O-2 | Rust Inhibiting Primers..... | Special Provision |
| O-3 | Corrosion Inhibiting Admixtures..... | Special Provision |
| S-8 | Wood - Structural..... | Special provision |
| S-9 | Metal Concrete Forms..... | Special provision |
| S-10 | Bridge Decks - Prefabricated..... | Special provision |
| S-12 | Bolt Substitutes - Pin and Collar.... | Special provision |
| S-13 | Bearing Pads..... | Form 815, 5.21.02 & M.17.01 |
| S-14 | Bolts - Tension Control..... | Special provision |
| S-16 | Anchoring Cement..... | Form 815, M.03.01-14 |
| T-2 | Paint Stripper - Chemical..... | Special Provision |

continued next page...

PART III - CATEGORIES OF UNLISTED PRODUCTS (WITH ACCEPTANCE CRITERIA) - CONT.

| <u>CODE</u> | <u>CATEGORY</u> | <u>ACCEPTANCE CRITERIA</u> |
|-------------|---|--|
| V-1 | Pavement Marking - Temporary..... | Form 815, 12.12.02 |
| V-2 | Delineators..... | Form 815, 12.05.02 & M.18.07 |
| V-3 | Flexible Delineator Posts..... | Not used in ConnDOT |
| V-5 | Paint - Epoxy Traffic..... | Special provision |
| V-6 | Pavement Marking Tape - Permanent ... | Special Provision |
| V-8 | Glass Beads for Pavement Markings.... | Form 815, 12.09.02, M.07.30 & Special Provision |
| W-3 | Liquid Membrane..... | Special Provision |
| X-2 | Abrasive Blast Enclosure Materials... | Special Provision |
| X-4 | Aluminized Steel Type II..... | Form 815 |
| X-5 | Arrowboards for Construction Sites..... | Form 815, 11.30 |
| X-6 | Barricades..... | Form 815, 9.79 |
| X-7 | Grates - Non-Metal..... | Special provision |
| X-8 | Roadway Plates - Non-Metal..... | Not used in ConnDOT |
| X-9 | Breakaway Sign Supports..... | Traffic detail sheets |
| X-11 | Cleaner Degreasers..... | Property Control Item |
| X-12 | Bridge Troughs and Water Diverters..... | Not used in ConnDOT |
| X-13 | Paving Blocks - Interlocking..... | Special provision |
| X-14 | Concrete Expanding Foam..... | Special provision |
| X-15 | Traffic Signals - Portable..... | Special provision |
| X-18 | Dock Fenders..... | Special provision |
| X-19 | Traffic Signal Lamps..... | Bid item - Purchasing |
| X-20 | Radar Worksite Beams..... | Purchasing item |
| X-21 | Metalizing..... | Special provision |
| X-22 | Backfill/Low Strength Concrete..... | Special provision |
| X-23 | Oil Absorbent..... | Not used in ConnDOT |
| X-24 | Crack Sealers - Concrete..... | Special provision |
| X-25 | Galvanizing spot treatment..... | Special provision |
| X-27 | Rumble Strip - Milled..... | Special provision |
| X-28 | Barrier - Safety Shape Water Filled Plastic..... | Special provision |
| X-29 | Waterstops - Preformed Rubber..... | Special provision |
| X-30 | Aluminum Structural Plate..... | Special provision |
| X-31 | Epoxy Grout..... | Special provision |
| X-32 | Tree Guying - Other than Wire..... | Form 815, 9.49.03-11, M.13.07-14d; Standard Drawings & Special Provision |
| X-33 | Rebar Protective Shrink Tube..... | Market through Powder Mfr. |
| X-34 | Crack Sealer - Concrete..... | Special provision |

PART IV - CATEGORIES OF PRODUCTS FOR USE ON MUNICIPAL OR OTHER NON-CONNDOT
SYSTEMS

These products are considered to be acceptable but are not used in the
Department for reasons relating to cost, appearance, logistics, etc.

| <u>CODE</u> | <u>CATEGORY</u> | <u>ACCEPTANCE CRITERIA</u> |
|-------------|--|----------------------------|
| C-7 | Extruded Concrete Curb..... | Municipal Standards |
| C-10 | Sign Post - Solid Filled Tubular Fiberglass..... | Strength Analysis |
| | 1. Composite Post 40 | |
| F-13 | Corrugated PVC Pipe Smooth Interior - Sanitary..... | Municipal Standards |
| | 1. Contech A-2000 Sewer Pipe | |

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APPENDIX A

INDEX OF PRODUCT CATEGORIES WITH CATEGORY CODES [X-X]

| | <u>Page</u> |
|--|-------------|
| ABRASIVE BLAST ENCLOSURE MATERIALS [X-2]..... | III-2 |
| ABSORBENT - OIL - SEE OIL ABSORBENT | |
| ALUMINIZED STEEL TYPE II [X-4]..... | III-2 |
| ALUMINUM STRUCTURAL PLATE [X-30]..... | III-2 |
| ANCHORING CEMENT [S-16]..... | III-1 |
| ANTISTRIPPING ADDITIVES - SEE BITUMINOUS MATERIALS AND ADDITIVES | |
| ARROWBOARDS FOR CONSTRUCTION SITES [X-5]..... | III-2 |
| ASHPALT PLUG EXPANSION JOINTS - SEE EXPANSION JOINTS | |
| BACKFILL - LOW STRENGTH [X-22]..... | III-2 |
| BARRICADES [X-6]..... | III-2 |
| BARRIER - SAFETY SHAPE WATER-FILLED PLASTIC [X-28]..... | III-2 |
| BEARINGS - POT, SPHERICAL OR DISC [S-1]..... | II-4 |
| BEARING PADS [S-13]..... | III-1 |
| BITUMINOUS MATERIALS AND ADDITIVES [E] | |
| ANTISTRIPPING ADDITIVES [E-1]..... | II-1 |
| POLYESTER FIBERS (for class 5B) [E-3]..... | II-1 |
| POLYPROPYLENE FIBERS (for class 5A) [E-2]..... | II-1 |
| RELEASE AGENTS [E-4]..... | II-1 |
| BOLT SUBSTITUTES - PIN AND COLLAR [S-12]..... | III-1 |
| BOLTS - TENSION CONTROL [S-14]..... | III-1 |
| BREAKAWAY SIGN SUPPORTS [X-9]..... | III-2 |
| BRIDGE DECKS - PREFABRICATED [S-10]..... | III-1 |
| BRIDGE JOINTS - SEE EXPANSION JOINTS | |
| BRIDGE PARAPET - SLIP FORM [C-6]..... | III-1 |
| BRIDGE TROUGHS AND WATER DIVERTERS [X-12]..... | III-2 |
| CATCH BASIN GRATES - ZINC METALIZED [F-7]..... | III-1 |
| CHAIN LINK FENCE - SEE FENCING | |
| CHANNELIZING DEVICES - TRAFFIC DRUMS TYPE 1 AND CONES [V-4]..... | II-6 |

APPENDIX A - CONTINUED

INDEX OF PRODUCT CATEGORIES WITH CATEGORY CODES [X-X]

| | <u>Page</u> |
|---|-------------|
| CHEMICAL ANCHORS [S-2]..... | I-9 |
| CLEANER DEGREASERS [X-11]..... | III-2 |
| COMPRESSION SEALS [H-6]..... | II-2 |
| CONCRETE ADDITIVES [K-5]..... | III-1 |
| CONCRETE ADMIXTURES [K] | |
| AIR-ENTRAINING [K-1]..... | II-3 |
| CORROSION INHIBITING [O-3]..... | III-1 |
| RETARDERS [K-2]..... | II-3 |
| WATER-REDUCING [K-3]..... | II-3 |
| HIGH RANGE, WATER-REDUCING [K-4]..... | II-4 |
| CONCRETE - CRACK SEALERS - SEE CRACK SEALERS | |
| CONCRETE CURING BLANKETS [L-1]..... | III-1 |
| CONCRETE CURING COMPOUNDS [L-2]..... | III-1 |
| CONCRETE EXPANDING FOAM [X-14]..... | III-2 |
| CONSTRUCTION JOINTS [H-10]..... | III-1 |
| CORROSION INHIBITING ADMIXTURES [O-3]..... | III-1 |
| CORRUGATED METAL PIPE - PVC LINED [F-6]..... | III-1 |
| CORRUGATED METAL PIPE - SMOOTH INTERIOR [F-10]..... | III-1 |
| CORRUGATED METAL PIPE - UNLINED [F-11]..... | III-1 |
| CRACK REPAIR - EPOXY INJECTION - SEE EPOXY INJECTION CRACK REPAIR | |
| CRACK SEALERS - CONCRETE [X-34]..... | III-2 |
| CURB - EXTRUDED CONCRETE - SEE EXTRUDED | |
| CULVERTS - PRECAST CONCRETE [F-4]..... | III-1 |
| DELINEATORS - FLEXIBLE POST - SEE FLEXIBLE..... | III-2 |
| DELINEATORS [V-2]..... | III-3 |
| DETECTOR LOOP SEALANTS [H-9]..... | III-1 |
| DOCK FENDERS [X-18]..... | III-2 |
| EDGE DRAINS - GEOCOMPOSITE [F-1]..... | III-1 |

APPENDIX A - CONTINUED

INDEX OF PRODUCT CATEGORIES WITH CATEGORY CODES [X-X]

| | <u>Page</u> |
|---|-------------|
| ENGINEERING FABRICS - SEE GEOTEXTILES | |
| EPOXY INJECTION CRACK REPAIR [X-1]..... | II-6 |
| EPOXY GROUT [X-31]..... | III-2 |
| EROSION CONTROL MATTING [I-1]..... | I-3 |
| EXPANSION JOINTS [H] | |
| ASPHALT PLUG - MOVEMENT CAPACITY 40 mm OR LESS [H-2]..... | II-2 |
| COMPRESSION SEALS [H-6]..... | II-2 |
| ELASTOMERIC CONCRETE EXPANSION JOINT SYSTEM [H-5]..... | II-2 |
| PAVEMENT JOINT AND CRACK SEALANT [H-1]..... | II-1 |
| PREFABRICATED - MOVEMENT CAPACITY 100 mm OR LESS [H-3]..... | II-2 |
| PREFABRICATED - MOVEMENT CAPACITY OVER 100 mm [H-4]..... | II-2 |
| SILICONE EXPANSION JOINT SEALANT [H-7]..... | III-1 |
| EXTRUDED CONCRETE CURB [C-7]..... | IV-1 |
| FENCING [C] | |
| CHAIN LINK FENCE - PIPE FOR FRAMEWORK [C-1]..... | III-1 |
| FENCE POSTS [C-9]..... | III-1 |
| FENCE POSTS FOR NON-CONNDOT USE [C-10]..... | IV-1 |
| SAFETY FENCE FOR CONSTRUCTION SITES [C-2]..... | III-1 |
| FIBERS - POLYESTER (FOR CLASS 5B) [E-3]..... | II-1 |
| FIBERS - POLYPROPYLENE (FOR CLASS 5A) [E-2]..... | II-1 |
| FILTER FABRICS - SEE GEOTEXTILES | |
| FLEXIBLE CHANNEL LINER - SEE EROSION CONTROL MATTING | |
| FLEXIBLE DELINEATOR POSTS [V-3]..... | III-2 |
| FORMS - METAL CONCRETE [S-9]..... | III-1 |
| GALVANIZING SPOT TREATMENT [X-25]..... | III-2 |
| GEOTEXTILES [X-10]..... | I-28 |
| GLARE SHIELDS [X-3]..... | II-6 |
| GLASS BEADS FOR PAVEMENT MARKING [V-8]..... | III-2 |

APPENDIX A - CONTINUED

INDEX OF PRODUCT CATEGORIES WITH CATEGORY CODES [X-X]

| | <u>Page</u> |
|--|-------------|
| GRATES - NON-METAL [X-7]..... | III-2 |
| GROUTS - NON-SHRINK CEMENTITIOUS [S-11]..... | II-5 |
| GUARDRAIL BEAMS [C-3]..... | III-1 |
| GUARDRAIL - OFFSET BLOCKS - SEE OFFSET BLOCKS FOR GUARDRAIL | |
| GUY WIRES - TREES - SEE TREE GUYING | |
| JERSEY BARRIER [C-4]..... | III-1 |
| JOINTS - SEE EXPANSION JOINTS | |
| JOINT SEALANTS - POLYURETHANE - SEE POLYURETHANE | |
| LIQUID MEMBRANE - SEE WATERPROOFING | |
| MANHOLE EXTENSION RINGS AND GRATES [F-5]..... | III-1 |
| MANHOLE STEPS [F-3]..... | III-1 |
| MANHOLES - PLASTIC PREFABRICATED [F-2]..... | III-1 |
| MEMBRANE WATERPROOFING - SEE WATERPROOFING | |
| METALIZING [X-21]..... | III-2 |
| MULCH BLANKETS - SEE EROSION CONTROL MATTING | |
| NOISE BARRIER [C-5]..... | III-1 |
| OIL ABSORBENT [X-23]..... | III-2 |
| OFFSET BLOCKS FOR W-BEAM GUIDE RAIL - PLASTIC [X-26]..... | II-7 |
| PAINT - EPOXY TRAFFIC [V-5]..... | III-2 |
| PAINT - STRUCTURAL [T] | |
| COATING SYSTEMS FOR NEW STEEL [T-1]..... | II-5 |
| FIELD COATINGS FOR BLAST CLEANED STEEL [T-5]..... | II-5 |
| MAINTENANCE COATING SYSTEMS - FIELD TOUCH UP [T-4]..... | II-5 |
| STRIPPERS - CHEMICAL [T-2]..... | III-1 |
| PATCHING MATERIALS [J] | |
| FAST SETTING HIGH STRENGTH PATCH MATERIALS FOR CONCRETE BRIDGE DECKS [J-1]..... | II-3 |
| FAST SETTING HIGH STRENGTH HEADER MATERIALS [J-2]..... | II-3 |
| CONCRETE REPAIR MATERIALS FOR STRUCTURES [J-3]..... | II-3 |

APPENDIX A - CONTINUED

INDEX OF PRODUCT CATEGORIES WITH CATEGORY CODES [X-X]

| | <u>Page</u> |
|---|-------------|
| POTHOLE PATCH [J-5]..... | III-1 |
| PAVEMENT JOINT AND CRACK SEALANTS [H-1]..... | II-2 |
| PAVEMENT MARKINGS - GLASS BEADS - SEE GLASS BEADS | |
| PAVEMENT MARKING - TEMPORARY [V-1]..... | III-2 |
| PAVEMENT MARKING TAPE - PERMANENT [V-6]..... | III-2 |
| PAVEMENT WARNING TRACK - MILLED RUMBLE STRIP [X-27]..... | III-2 |
| PAVING BLOCKS - INTERLOCKING [X-13]..... | III-2 |
| PENETRATING SEALER PROTECTIVE COMPOUND [W-1].... | I-26 |
| PILE POINT REINFORCEMENT - PREFABRICATED [S-3]..... | II-4 |
| PILE SPLICERS - PREFABRICATED [S-4]..... | II-4 |
| PIPE [F] | |
| ALUMINIZED STEEL TYPE II - SEE ALUMINIZED | |
| ALUMINUM STRUCTURAL PLATE - SEE ALUMINUM | |
| PLASTIC - SEE PLASTIC PIPE | |
| PVC LINED CORRUGATED METAL - SEE CORRUGATED | |
| SMOOTH INTERIOR CORRUGATED METAL - SEE CORRUGATED | |
| RELINING [F-8]..... | II-1 |
| UNLINED CORRUGATED METAL - SEE CORRUGATED | |
| PLASTIC BARRIER - WATER FILLED SAFETY SHAPE - SEE BARRIER | |
| PLASTIC PIPE [F-9]..... | III-1 |
| POLYESTER FIBERS (FOR CLASS 5B) [E-3]..... | II-1 |
| POLYPROPYLENE FIBERS (FOR CLASS 5A) [E-2]..... | II-1 |
| POLYURETHANE JOINT SEALANTS [H-8]..... | III-1 |
| PORTLAND CEMENT [S-7]..... | II-5 |
| PORTLAND CEMENT CONCRETE - SEE CONCRETE | |
| POTHOLE PATCHING MACHINE [J-4]..... | III-1 |
| POTHOLE PATCH MATERIAL - SEE PATCHING MATERIALS | |
| PRIMERS - RUST INHIBITING - SEE RUST INHIBITING PRIMERS | |

APPENDIX A - CONTINUED

INDEX OF PRODUCT CATEGORIES WITH CATEGORY CODES [X-X]

| | <u>Page</u> |
|--|-------------|
| RADAR WORKSITE BEAM [X-20]..... | III-2 |
| REBAR CONNECTORS [S-5]..... | II-4 |
| REBAR PROTECTIVE SHRINK TUBE [X-33]..... | III-2 |
| REBAR ZINC RICH COATINGS - REHABILITATION [X-17]..... | II-7 |
| REFLECTIVE SHEETING TYPE I [V-9] | I-11 |
| REFLECTIVE SHEETING TYPE II [V-10] | I-13 |
| REFLECTIVE SHEETING TYPE III [V-11] | I-14 |
| REFLECTIVE SHEETING TYPE V [V-12]..... | I-19 |
| REFLECTIVE SHEETING TYPE VI [V-13] | I-20 |
| REFLECTIVE SHEETING- BRIGHT WIDE ANGLE RETROREFLECTIVE [V-14]..... | I-21 |
| RELEASE AGENTS - BITUMINOUS [E-4]..... | II-1 |
| RETAINING WALLS - [S-15]..... | II-5 |
| ROADWAY PLATES - NON-METAL [X-8]..... | III-2 |
| RUMBLE STRIP - MILLED - SEE PAVEMENT WARNING TRACK | |
| RUST CONVERTERS [0-1]..... | III-1 |
| RUST INHIBITING PRIMERS [0-2]..... | III-1 |
| SEDIMENT CONTROL FOR DRAINAGE STRUCTURES - TEMPORARY [I-2] | III-1 |
| SHEAR CONNECTORS - WELDED STUD [F-13]..... | II-4 |
| SIGN SUPPORTS - BREAKAWAY - SEE BREAKAWAY | |
| SILT FENCE - SEE GEOTEXTILES | |
| SLOPE PROTECTION - TEMPORARY - SEE TEMPORARY | |
| STRIPPERS - CHEMICAL PAINT - SEE PAINT | |
| Stormwater Treatment Oil Grit Separators[S-6]..... | II-2 |
| TEMPORARY SLOPE PROTECTION [C-8]..... | III-1 |
| TRAFFIC DRUMS AND CONES - SEE CHANNELIZING DEVICES | |
| TRAFFIC SIGNAL LAMP [X-19]..... | III-2 |
| TRAFFIC SIGNALS - PORTABLE [X-15]..... | III-2 |

APPENDIX A - CONTINUED

INDEX OF PRODUCT CATEGORIES
WITH CATEGORY CODES [X-X]

| | <u>Page</u> |
|--|-------------|
| TREE GUYING - OTHER THAN WIRE [X-32] | III-2 |
| WATERPROOFING MEMBRANES AND MATERIALS [W] | |
| LIQUID MEMBRANE [W-3] | III-2 |
| MEMBRANE WATERPROOFING [W-2] | II-5 |
| PROTECTIVE COMPOUND PENETRATING SEALER - SEE PENETRATING | |
| WATERSTOPS - PREFORMED RUBBER [X-29] | III-2 |
| WOOD - STRUCTURAL [S-8] | III-1 |